



VENTURO
TRUCK MOUNTED CRANES

HT50KX

HSAAAC-PB** & HSBAAC-PB**
INSTALLATION & OWNER'S MANUAL

TABLE OF CONTENTS

HT50KX / Prop Ctrl / W/ Eng Ctrls (HS*AAC-PB**)

SECTION 100 **DESCRIPTION & SPECIFICATIONS**

22912 INSTALLATION DIMENSIONS
18353 MOUNTING DIMENSIONS - BASE PLATE
22351 CAPACITY CHART - HT50KX

SECTION 150 **SAFETY**

15394 VEHICLE & CRANE ELECTRICAL HAZARD INFORMATION
920612 SAFETY & HAZARDS - GENERAL
19217 WINCH SAFETY WARNINGS
22171 DECAL PLACEMENT
22181A SAFETY DECALS DRAWING & LIST
22181B SAFETY DECALS DRAWING & LIST
22181C SAFETY DECALS DRAWING & LIST
22181D SAFETY DECALS DRAWING & LIST

SECTION 200 **INSTALLATION**

22172 CRANE INSTALLATION (PAGE 1 OF 2)
22173 CRANE INSTALLATION (PAGE 2 OF 2)
22345A CRANE OPERATION & MAINTENANCE INSTRUCTIONS (PAGE 1 OF 3)
22345B CRANE OPERATION & MAINTENANCE INSTRUCTIONS (PAGE 2 OF 3)
22174 CRANE OPERATION & MAINTENANCE INSTRUCTIONS (PAGE 3 OF 3)
22168 SAFETY SHUTOFF INSTRUCTIONS
20051 ROTATION STOP LOCATION
22825 22785 HYDRAULIC TANK DIMENSIONS
22883 PTO INSTALLATION
22913 COMPARTMENT DRAWING
22245 WIRE ROPE INSTALLATION

SECTION 400 **REPLACEMENT PARTS**

22914 HT40/50KX CRANE REPLACEMENT PARTS DRAWING
22915 HT40/50KX CRANE REPLACEMENT PARTS LIST
22916 21420 BOOM REPLACEMENT PARTS DRAWING
22917 21420 BOOM REPLACEMENT PARTS LIST
22930 21410 BOOM REPLACEMENT PARTS DRAWING
22931 21410 BOOM REPLACEMENT PARTS LIST
22876 WINCH REPLACEMENT PARTS DRAWING & LIST
22183 PROP HYDRAULIC SYSTEM COMPONENTS REPLACEMENT PARTS DRAWING
22188 PROP HYDRAULIC SYSTEM COMPONENTS REPLACEMENT PARTS LIST
▲ 22941 22736 HYDRAULIC VALVE MANIFOLD REPLACEMENT PARTS DWG & LIST
22185 ELECTRICAL SCHEMATIC - PROPORTIONAL
22125 ELECTRICAL SCHEMATIC - PROP SOCKET WIRING (W/ ENGINE CONTROLS)
22187 HYDRAULIC SYSTEM SCHEMATIC - PROPORTIONAL CONTROL 40/50KX
22073 22065 REPLACEMENT PARTS DRAWING
22918 22685 ANTI-TWO-BLOCK SYSTEM (STANDARD LEFT SIDE MOUNT)
22919 22450 ANTI-TWO-BLOCK SYSTEM (OPTIONAL RIGHT SIDE MOUNT)
22615 ENGINE START/STOP & THROTTLE CONTROL
22783 22784 PTO KIT REPLACEMENT PARTS DRAWING & LIST
20842 22767-1 FIELD SERVICE LABEL KIT



MFG., INC.
CINCINNATI, OHIO

TITLE
TABLE OF CONTENTS

HT50KX (HS*AAC-PB)**

DATE
9-19-09C

SUPERCEDES
12-17-08B

SECTION
-

22936

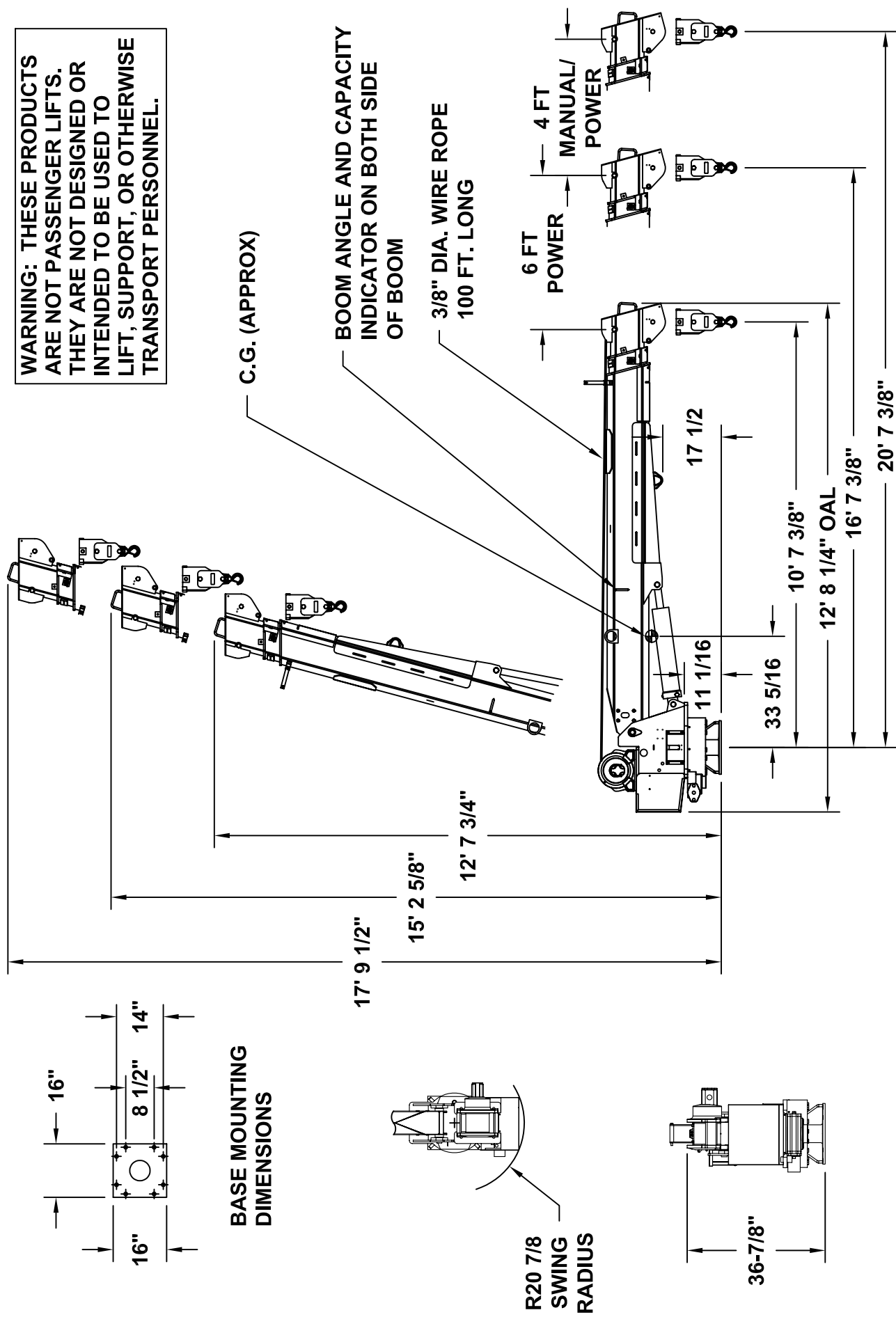
SECTION 100

DESCRIPTION

&

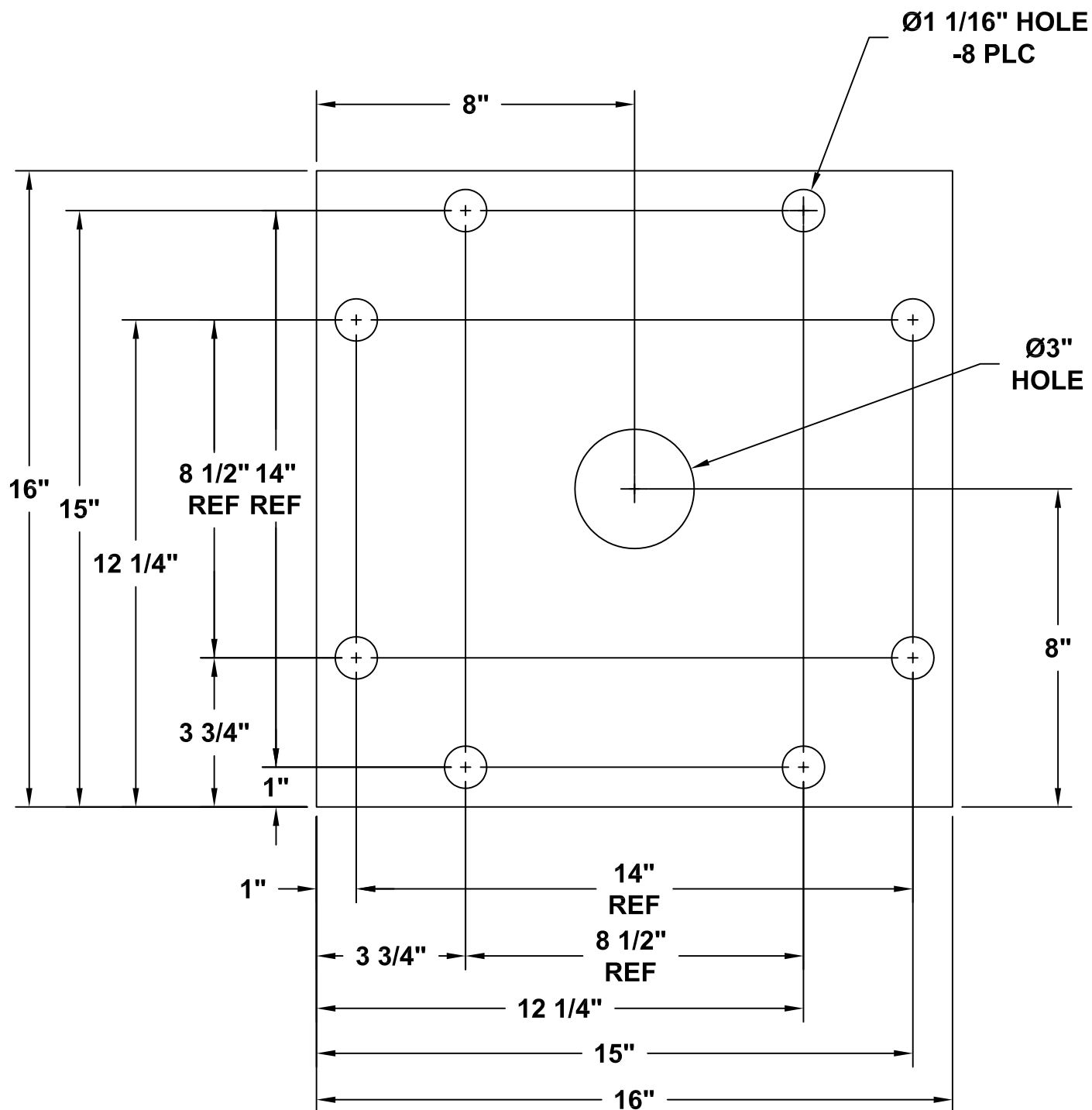
SPECIFICATIONS

WARNING: THESE PRODUCTS ARE NOT PASSENGER LIFTS. THEY ARE NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.



TITLE INSTALLATION DWG	DATE 7-9-08A	SECTION C100
HT40KX, HT50KX - 10-16-20	SUPERSEDES 9-4-07	22912

▲ HT40/50KX BASE MOUNTING DIMENSIONS



MFG., INC.
CINCINNATI, OHIO

TITLE
▲ BASE MOUNTING DIM

HT40/50KX

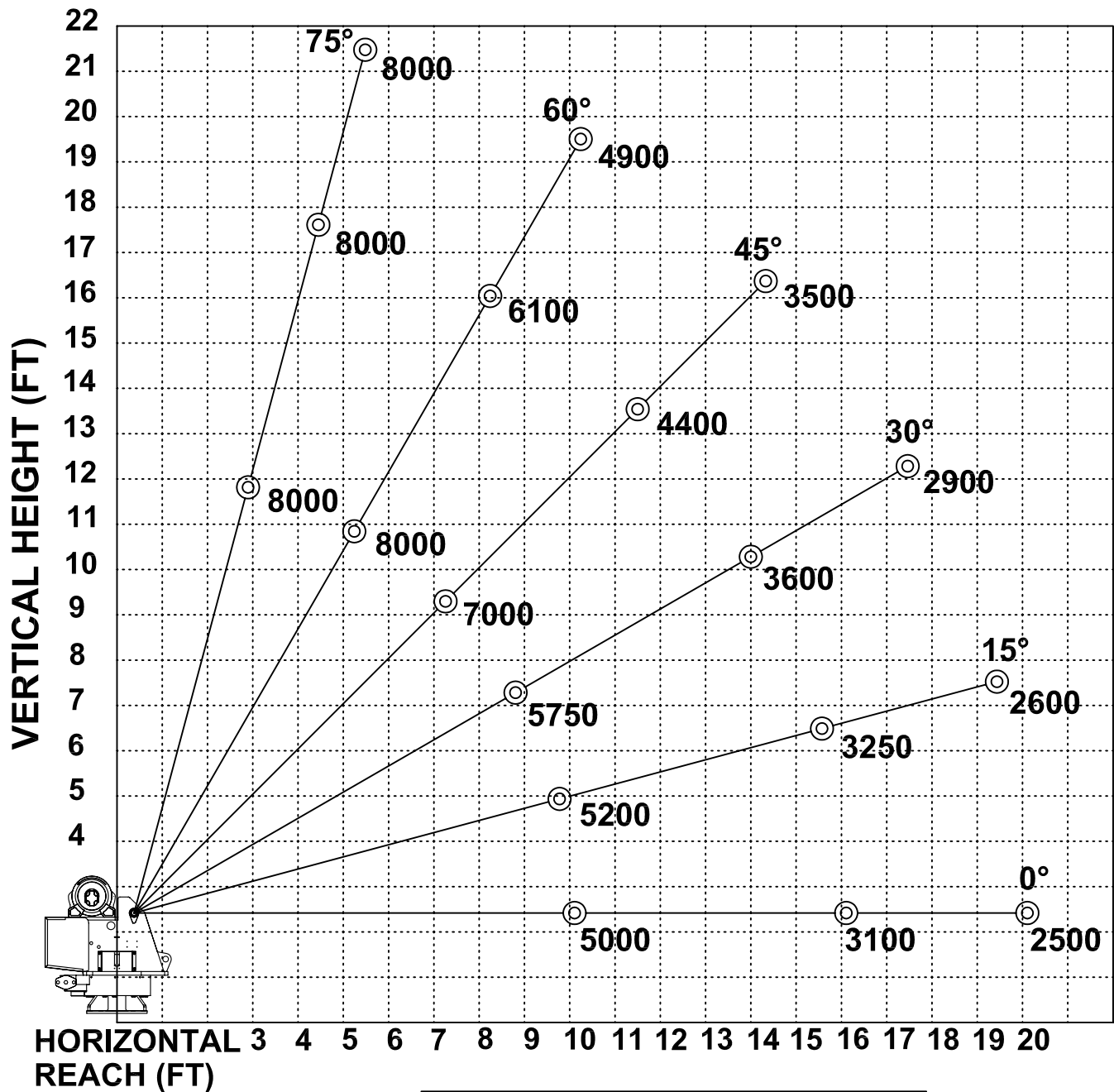
DATE
3-3-05F

SUPERSEDES
5-20-03E

SECTION
C100

18353

HT50KX - 10-16-20 BOOM MAXIMUM CAPACITY CHART



**MUST USE SNATCH BLOCK
FOR LOADS OF 4000 LBS.
AND GREATER**

SECTION 150

SAFETY

VEHICLE & CRANE MOUNTED ELECTRICAL HAZARD SIGN APPLICATION & INFORMATION

ET & HT CRANE SERIES



- ▲ SIGN NO. 15393A DISPLAYS THE INTERNATIONAL SYMBOL FOR ELECTRICITY AND WARNS OF DANGER FROM AN ELECTRICALLY CHARGED VEHICLE, CRANE, OR LOAD. FOUR ARE RECOMMENDED (ONE FOR EACH SIDE AND ONE FOR EACH END OF VEHICLE) TO BE APPLIED IN LOCATIONS WHICH ARE READILY VISIBLE TO GROUND PERSONNEL.



- ▲ SIGN NO. 15401 PROVIDES ADDITIONAL WARNING OF LEGAL REQUIREMENTS WHEN OPERATING NEAR HIGH VOLTAGE LINES. THIS SIGN IS PLACED ON THE CONTROL PENDANT SIDE OF BOOM.

REQUIRED MINIMUM CLEARANCES REFERRED TO ON SIGN NO. 15401

REQUIRED CLEARANCES FROM OVERHEAD HIGH-VOLTAGE LINES

NOMINAL VOLTAGE (kV) (PHASE TO PHASE)	MINIMUM REQUIRED CLEARANCE (FEET) *
0 - 50	10
over 50 - 200	15
over 200 - 350	20
over 350 - 500	25
over 500 - 750	35
over 750 - 1000	45

REQUIRED CLEARANCES FROM ENERGIZED HIGH-VOLTAGE CONDUCTORS (WHILE IN TRANSIT)

NOMINAL VOLTAGE (kV) (PHASE TO PHASE)	MINIMUM REQUIRED CLEARANCE (FEET) *
0 - 0.75	4
over 0.75 - 50	6
over 50 - 345	10
over 345 - 750	16
over 750 - 1000	20

* NOTE: ENVIRONMENTAL CONDITIONS SUCH AS FOG, SMOKE, OR PRECIPITATION MAY REQUIRE INCREASED CLEARANCES



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

ET & HT CRANE SERIES

DATE
5-15-02H

SUPERCEDES
5-13-97G

SECTION
C150

15394

CRANE SAFETY AND HAZARDS

HT25KX, HT40KX, HT50KX

CAUTIONS

1. INSPECT VEHICLE AND CRANE, INCLUDING OPERATION, PRIOR TO USE DAILY.
2. DO NOT USE THIS EQUIPMENT EXCEPT ON SOLID, LEVEL SURFACE WITH CRANE MOUNTED ON FACTORY-RECOMMENDED TRUCK.
3. BEFORE OPERATING THE CRANE, REFER TO MAXIMUM LOAD (CAPACITY) CHART ON CRANE FOR OPERATING (LOAD) LIMITATIONS.
4. DO NOT OPERATE, WALK, OR STAND BENEATH BOOM OR A SUSPENDED LOAD.
5. ATTACH PENDANT CORD SUPPORT SNAP TO ATTACHMENT POINT BEFORE PLUGGING IN PENDANT.
6. UNPLUG PENDANT AND DISENGAGE PTO SYSTEM WHEN CRANE NOT IN USE.
7. FOR TRAVEL, BOOM MUST BE IN STOWED POSITION.

DANGER

- THIS CRANE IS NOT A PASSENGER LIFT
- IT IS NOT DESIGNED OR INTENDED TO BE USED TO LIFT, SUPPORT, OR OTHERWISE TRANSPORT PERSONNEL.

YOU MUST NOT OPERATE THIS CRANE UNLESS

1. YOU HAVE BEEN TRAINED IN THE SAFE OPERATION OF THIS CRANE
AND
2. YOU KNOW AND FOLLOW THE SAFETY AND OPERATING RECOMMENDATIONS CONTAINED IN THE MANUFACTURER'S MANUALS, YOUR EMPLOYER'S WORK RULES, AND APPLICABLE GOVERNMENT REGULATIONS. AN UNTRAINED OPERATOR SUBJECTS HIMSELF AND OTHERS TO DEATH OR SERIOUS INJURY.

ELECTROCUTION HAZARD

- THIS MACHINE IS NOT INSULATED.
- MAINTAIN SAFE CLEARANCES FROM ELECTRICAL LINES AND APPARATUS.
- YOU MUST ALLOW FOR BOOM SWAY, ROCK OR SAG, AND ELECTRICAL LINE AND LOADLINE SWAYING.
- THIS LIFTING DEVICE DOES NOT PROVIDE PROTECTION FROM CONTACT WITH OR PROXIMITY TO AN ELECTRICALLY CHARGED CONDUCTOR.
- YOU MUST MAINTAIN A CLEARANCE OF AT LEAST 10 FEET BETWEEN ANY PART OF THE CRANE, LOADLINE, OR LOAD, AND ANY ELECTRICAL LINE OR APPARATUS CARRYING UP TO 50,000 VOLTS. ADDITIONAL CLEARANCE IS REQUIRED FOR VOLTAGES IN EXCESS OF 50,000 VOLTS. REFER TO DRAWING 15394 FOR ADDITIONAL INFORMATION.
- **DEATH OR SERIOUS INJURY** WILL RESULT FROM CONTACT OR INADEQUATE CLEARANCE.



MFG., INC.
CINCINNATI, OHIO

TITLE

INSTALLATION DWG

DATE

5-13-97A

SECTION

C150

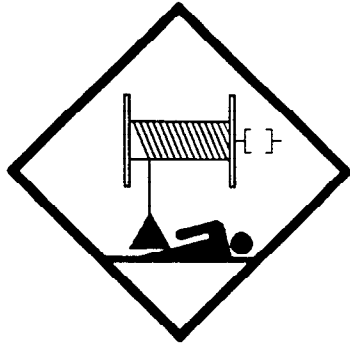
HYDRAULIC CRANES

SUPERCEDES

6-12-92

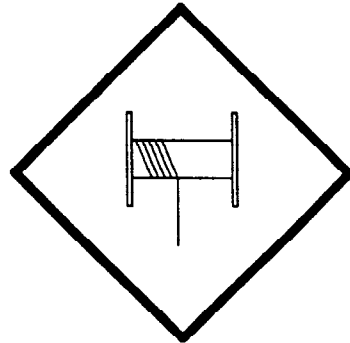
920612

WINCH SAFETY WARNINGS



DANGER

**DO NOT DISENGAGE
WINCH UNDER LOAD**



DANGER

**THE LAST FIVE
WRAPS OF WIRE ROPE
MUST BE LEFT ON
THE DRUM TO ASSIST
THE WIRE ROPE CLAMP IN
HOLDING THE LOAD**



WARNING

**WINCHES ARE NOT
TO BE USED FOR
THE LIFTING OR
MOVING OF
PERSONS**



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

HT CRANES

DATE
5-26-98B

SUPERCEDES
10-17-97A

SECTION
C150

I19217

15581

ATTACHMENT

15398

UNPLUG
REMOTE

15401

UNLAWFUL
TO OPERATE

22499

KNOW
YOUR
SIGNALS

15381

RIGHT

14473-1

OIL

15391

DANGER
(NOT
PASSENGER
LIFT)

20834

OVERRIDE
INST
INSIDE

15392

DANGER
ELEC.
HAZARD

14473-2

GREASE
2 PLACES

15390

CAUTION

15390

LEFT

MANUAL OVERRIDE

19314-2

NON-PROP

22768-2

PROP

MANUAL OVERRIDE

19314-1

NON-PROP

22768-1

PROP

SHUT OFF DECAL

19315-1

MANUAL

19315-2

PROPORTIONAL

INSIDE OF REAR COVER

MODEL NO.

19746 - HT40

19747 - HT50

19788

PROPORTIONAL CONTROL

* PROPORTIONAL ONLY

CAPACITY

DECAL

MODEL

PART NO.

RIGHT

HT40

22342-1

LEFT

HT40

22342-2

RIGHT

HT50

22352-1

LEFT

HT50

22352-2

17389

MEDIUM
VENTURO

17389-4

SMALL
VENTURO

14473-2

GREASE

BOOM

BACK

VENTURO

MANUFACTURING, INC.

CINCINNATI, OHIO

TITLE

DECAL PLACEMENT

HT40/50KX

DATE

10-23-08E

SUPERSEDES

9-5-07D

SECTION

C150

22171

PART NO.: 15398

DECAL: UNPLUG REMOTE CONTROL

FUNCTION: To inform the operator to unplug remote control when not being used.

QUANTITY: 1

PLACEMENT: Right side of housing.



PART NO.: 15401

DECAL: UNLAWFUL TO OPERATE

FUNCTION: To inform the operator of proper operation in vicinity of power lines.

QUANTITY: 1

PLACEMENT: Right side of housing.



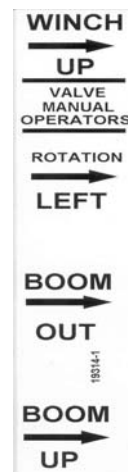
PART NO.: 19314-1

DECAL: MANUAL OVERRIDE (NON-PROP)

FUNCTION: To inform the operator of manual override locations.

QUANTITY: 1

PLACEMENT: Inside of rear cover.



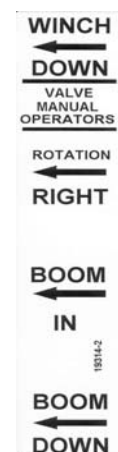
PART NO.: 19314-2

DECAL: MANUAL OVERRIDE (NON-PROP)

FUNCTION: To inform the operator of manual override locations.

QUANTITY: 1

PLACEMENT: Inside of rear cover.



MFG., INC.
CINCINNATI, OHIO

TITLE

DECAL DRAWING & LIST

DATE

12-14-05A

SECTION

C150

HT40/50KX

SUPERSEDES

5-11-05

22181A

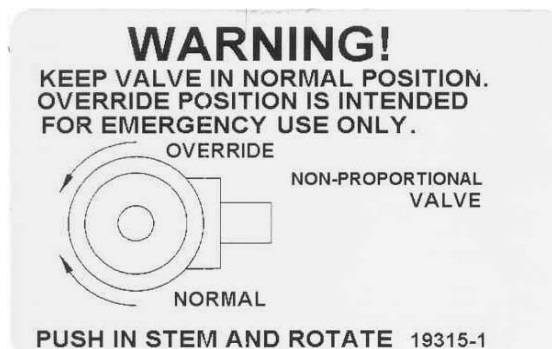
PART NO.: 19315-1

DECAL: SHUT OFF (NON-PROPORTIONAL)

FUNCTION: To show the operator how to override master shut off valve.

QUANTITY: 1

PLACEMENT: Inside rear cover.



PART NO.: 19315-2

DECAL: MANUAL OVERRIDE (PROPORTIONAL)

FUNCTION: To show the operator how to override proportional valve.

QUANTITY: 1

PLACEMENT: Inside rear cover.



PART NO.: 22768-1

DECAL: MANUAL OVERRIDE

FUNCTION: To inform the operator of manual override locations.

QUANTITY: 1

PLACEMENT: Inside rear cover.



PART NO.: 22768-2

DECAL: MANUAL OVERRIDE

FUNCTION: To inform the operator of manual override locations.

QUANTITY: 1

PLACEMENT: Inside rear cover.



MFG., INC.
CINCINNATI, OHIO

TITLE
DECAL DRAWING & LIST

HT40/50KX

DATE
12-14-05B

SUPERSEDES
9-9-05A

SECTION
C150

22181B

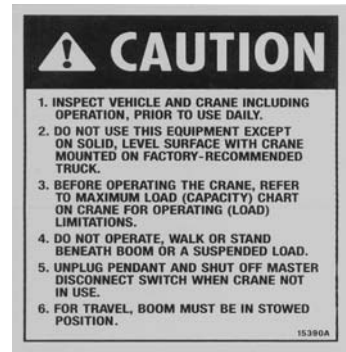
PART NO.: 15390

DECAL: CAUTION - INSPECT VEHICLE & CRANE

FUNCTION: To inform the operator of key operating requirements.

QUANTITY: 1

PLACEMENT: Left side of rear cover.



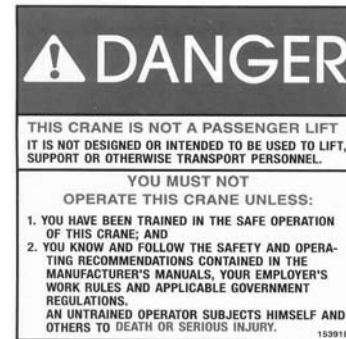
PART NO.: 15391

DECAL: DANGER - NOT PASSENGER LIFT

FUNCTION: To inform the operator not to lift, support or transport personnel, and to ensure that crane operator is adequately trained.

QUANTITY: 1

PLACEMENT: Left side of rear cover.



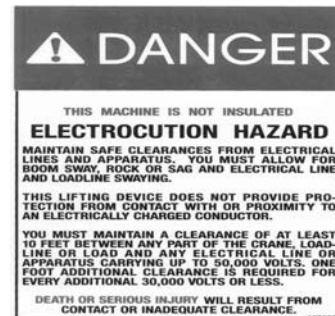
PART NO.: 15392

DECAL: DANGER - ELECTROCUTION HAZARD

FUNCTION: To inform the operator that the machine (crane) represents an electrocution hazard should it come too near or in contact with electrical voltage source.

QUANTITY: 1

PLACEMENT: Left side of rear cover.



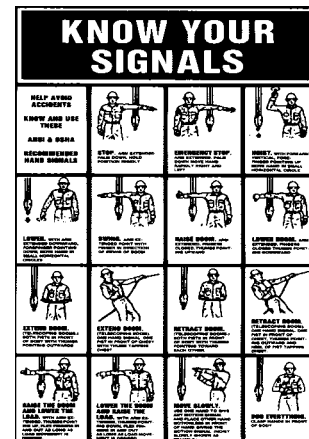
PART NO.: 22499

DECAL: KNOW YOUR SIGNALS

FUNCTION: To inform the operator of proper signals.

QUANTITY: 1

PLACEMENT: Right side of rear cover.



MFG., INC.
CINCINNATI, OHIO

TITLE

DECAL DRAWING & LIST

DATE

9-11-06B

SECTION

C150

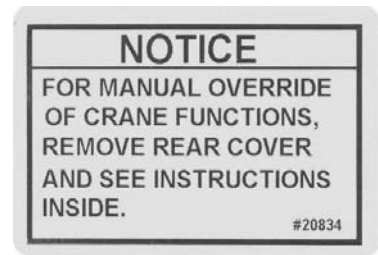
HT40/50KX

SUPERSEDES

9-9-05A

22181C

PART NO.: 20834
DECAL: FOR MANUAL OVERRIDE
FUNCTION: To inform the operator of locations
of manual override instructions.
QUANTITY: 1
PLACEMENT: Left side of rear cover.



▲
PART NO.: 17389-4
DECAL: SMALL VENTURO
FUNCTION: To show manufacturer of crane.
QUANTITY: 1
PLACEMENT: Rear cover.



MFG., INC.
CINCINNATI, OHIO

TITLE

DECAL DRAWING & LIST

DATE

9-11-06A

SECTION

C150

SUPERSEDES

HT40/50KX

12-15-05

22181D

SECTION 200

INSTALLATION



CRANE INSTALLATION

HT40KX, HT50KX

BODY REINFORCEMENT

The truck body must be reinforced and outriggers provided to withstand the combined loads resulting from lifting and the weight of the crane and boom.

The maximum combined overturning moment for the HT40KX is 45,000 ft. lbs. and for the HT50KX is 55,000 ft. lbs.

The maximum vertical load for the HT40KX is 7100 lbs. and for the HT50KX is 9300 lbs.

CRANE MOUNTING

The crane base plate or mounting pedestal must be bolted to the body reinforcing plate with eight (8) grade five (5) bolts of 1" dia. with either coarse or fine threads. A 6" dia. hose clearance hole must be cut in this plate to allow the hoses to swing and coil freely.

ROTATION POSITIONING

The HT cranes are shipped with the boom rotated as shown on drawing 20051. It can be in any position that pleases the user since the boom can always reach the storage and travel position by rotating one way or the other.

HYDRAULIC CONNECTIONS

The crane is furnished with a pressure, return and a case drain hose that come down through the center of the housing. Included in the installation kit are two hydraulic swivels and two more hoses. These hoses and swivels are to be arranged in the compartment or pedestal below the crane as shown on drawing 20698 (non-proportional), or 22913 (proportional) using the angle bulkhead fittings also furnished in the installation kit. The case drain hose must return to the tank unrestricted.

These hoses are to be connected in a relaxed position while the crane is at the midpoint of the 400 degree rotation range -- regardless of the final position of the boom during storage/travel.

The bulkhead fittings may be located on any side of the compartment relative to the middle of rotation position.

NOTE: If you purchased one of Venturo's hydraulic packages (P/N 19294-X.XXX), you will have received our pressure gauge kit. This kit includes a gauge, hose and bulkhead "T" fitting and should be installed on the pressure hose.



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

HT40KX, HT50KX

DATE
11-4-08A

SUPERCEDES
5-13-05

SECTION
C200

22172

ELECTRICAL CONNECTIONS

A 25 ft. electrical power lead - intended for 12V DC only - also comes down through the center of the crane base plate with the hoses. This lead should be looped in the compartment so that it remains relaxed throughout the 400 degree rotation of the crane.

A 15amp circuit breaker is mounted on the crane and protects the crane's internal wiring and solenoid coils. The 15amp circuit breaker does not protect the 25 foot electrical power lead. For added protection, the 25 ft. lead can be connected to a 15-20 amp protected circuit that, if possible, is powered only when the vehicle engine is running

HYDRAULIC FLUID

<u>Average Climate</u>	<u>Type of Oil</u>
Cold to Moderate	ISO Grade AW 46
Warm to Hot	ISO Grade AW 68

The fluid should have the highest anti-wear characteristics and treated to inhibit rust and oxidation.

HYDRAULIC HOSES & LINES

The minimum sizes for lines and hoses are as follows:

	NON-PROP	PROP
PRESSURE	3/8"	1/2"
RETURN	1/2"	5/8"
SUCTION	3/4"	1-1/4"

RESERVOIR

The PTO reservoir should have a capacity of 10 gallons (non-proportional) or 25 gallons (proportional) fitted with 100 mesh suction screen, 10 micron return line filter, and filler/breather cap.

PTO PUMP

The PTO pump should be sized to allow an engine idle speed range that will deliver approximately 2.5 GPM for the HT40KX standard (non-proportional), 12.0 GPM for the HT40KX proportional, 3.0 GPM for the HT50KX standard or 12.0 GPM for the HT50KX proportional. The crane's relief pressure is set at 3000 psi.

PTO START-UP

Before connecting the PTO system to the crane pressure and return hoses, connect the PTO pressure and return lines together at the bulkhead. Operate the PTO system for about two (2) minutes per gallon of reservoir capacity (10 gallon reservoir 20 minutes) to flush out the lines and filter all the fluid several times.

ENGINE START/STOP & THROTTLE CONTROL

If your crane was purchased with optional engine start/stop and throttle control, refer to drawing 22615 in the replacement parts section for further information.



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

HT40KX, HT50KX

DATE
11-4-08B

SUPERCEDES
2-20-06A

SECTION
C200

22173

CRANE OPERATION AND MAINTENANCE INSTRUCTIONS

HT40KX, HT50KX

SAFETY

Before operating this crane, read and understand these instructions, the 920612 Crane Safety and Hazards Information Sheet, and review all safety & instruction labels on the crane.

CRANE INSPECTION

Before operating this crane, inspect for wear, damage, or oil leakage. After the wire rope has been run out, check for wear, kinks, and broken strands. Check the hook and safety latch for damage. Correct any problems before using the crane.

CAPACITY

Before operating this crane, review the capacity charts on the sides of the boom to relate the load to be lifted to the boom length and angle. The boom angle is shown by a gravity arrow.

SNATCH BLOCK

If the load exceeds 3000 lbs.-HT40KX or 4000 lbs.-HT50KX or if reduced winching speed for better control of smaller loads is required, use the snatch block to rig the crane for two part line operation.

CONTROLS

This crane is operated by a remote control pendant. The pendant should be unplugged and stored in a compartment when the crane is not in use.

Before plugging the pendant in, inspect the plug, socket, cord, pendant head, and switches for damage. Actuate all four switches both ways to verify that they all have the same feel and sound and that they return to the center position.

Plug the pendant into the socket on the right side of the crane and snap the strain relief tether to the crane housing.

PTO SYSTEM

Check the hydraulic fluid level in the PTO system reservoir. Engage PTO and set the engine idle speed to provide the desired hydraulic flow rate per the PTO system instructions. A lower idle setting may be used for more delicate spotting of loads if required.

CRANE OPERATION

Use "Winch Down" to release tension on the wire rope to unhook it from the storage tie down position.

Use "Boom Up" to elevate the boom from the boom rest position.

Avoid repeated rapid reversals of the control switches. This can cause the load to swing.

Check all control functions to see that they are working as described in the following section.



MFG., INC.
CINCINNATI, OHIO

TITLE
INSTALLATION DWG

HT40KX, HT50KX

DATE
8-12-99B

SUPERCEDES
7-17-97

SECTION
C200

22345a

CONTROL FUNCTIONS

WINCH "UP" and "DOWN" - Raises and lowers the load with the winch.

BOOM "UP" and "DOWN" - Raises and lowers the boom elevation angle. The boom elevates from 8 degrees below horizontal to 75 degrees above horizontal.

BOOM "OUT" and "IN" - Extends and retracts the boom. The boom hydraulic extension stroke is 6 ft. or 10 ft. ▲

ROTATION "L" and "R" - Controls the left and right direction of the crane rotation. The crane rotation is limited to 400 degrees.

POWER - (Non Proportional Systems) Energizes safety shutoff valve. See page 22328 for detailed operations instructions and warnings.

TRIGGER (Proportional Systems Only) - Varies the flow rate delivered to the crane valve. The farther the trigger is pulled, the faster the selected crane function operates.

OVERLOAD SENSING SYSTEM

This crane is equipped with an Overload Sensing System. If the capacity of the crane is exceeded, the "Winch Up", "Boom Down", and "Boom Out" functions will be shut down. The "Winch Down", "Boom Up", and "Boom In" functions will continue to operate and can be used to relieve the overload condition. The "Rotation" function also will continue to operate.

For crane models HT25 serial numbers 80157, HT40 serial numbers 84092 and HT50 serial numbers 85086 and below, the Overload system is inoperative if the boom elevation is at the bottom or top limit of travel. To relieve this condition, raise or lower the boom slightly before lifting the load. Cranes with serial numbers above the aforementioned have been modified to allow the Overload system to remain active at the top of boom travel.

TWO-BLOCK SENSING SYSTEM

This crane is equipped with an anti two-block device that is mounted at the tip of the boom. If the snatch block/overhaul weight contacts the device the "Winch Up", "Boom Down", and "Boom Out" functions are disabled. The "Winch Down", "Boom Up", and "Boom In" functions will continue to operate and can be used to relieve the two-block condition. Refer to Drawing 22449 for replacement parts and configuration information.

TELESCOPIC HEXAGONAL BOOM

The hexagonal shaped boom shall telescope to provide a horizontal reach range of 10 ft. to 20 ft. using a hydraulic power extension cylinder with a 10 ft. stroke. See page 22930. A 6 ft. hydraulic ▲ power extension and a 4 ft. manual extension section is also available. See page 22917.

TRUCK SETUP & OUTRIGGERS

1. The truck should be parked on ground that is as level and as firm as possible when using the crane.
2. The center of the crane should be positioned close enough to the job so that it can be operated at a reach that puts the load within the rated capacity of the crane.



MFG., INC.
CINCINNATI, OHIO

TITLE

INSTALLATION DWG

DATE

11-4-08F

SECTION

C200

HT40KX, HT50KX

SUPERCEDES

3-4-03E

22345b

3. Set the vehicle parking brake and put the vehicle transmission in "park" if it is an automatic.
4. Deploy the outriggers to help stabilize the vehicle against rocking or overturning when lifting with the crane.

PREPARATION FOR TRAVEL

1. Return the outriggers to the stowed position. Install and secure all pins.
2. Stow the crane boom in the boom support.
3. Hook the winch line to a tie down point on the body or pedestal and apply tension.
4. Disengage the PTO pump and idle speed control.
5. Unplug the control pendant and store in a body compartment or the cab.

MAINTENANCE

The crane requires only periodic lubrication. As a standard procedure, this can be done at the time the vehicle is serviced.

The winch planetary gearbox lube should be maintained at the level plug.

To ensure optimal winch performance, the following lube schedule and lube specifications should be followed:

Initial Change - after 6 weeks or 10 hours of operation.

Periodic Change - on an annual basis or every 50 hours of operation.

<u>Temp Range (°F)</u>	<u>Winch Hydraulic Oil</u>
120 to 10	SAE 50
40 to -25	75W90
30 to -50	Conoco DN600 or equivalent

Service grease fittings and rotation gear with molybdenum-disulfide graphite-filled lithium-based extreme pressure grease.

Grease fitting locations:

- Boom pivot at rear of boom
- Speed reducer (2 fittings)
- Elevation cylinder tail clevis
- Bottom of Swing Bearing (2 fittings)

Remove rear cover and check all hydraulic tube and hose fittings for tightness.

Check electrical connections for looseness and corrosion.



MFG., INC.
CINCINNATI, OHIO

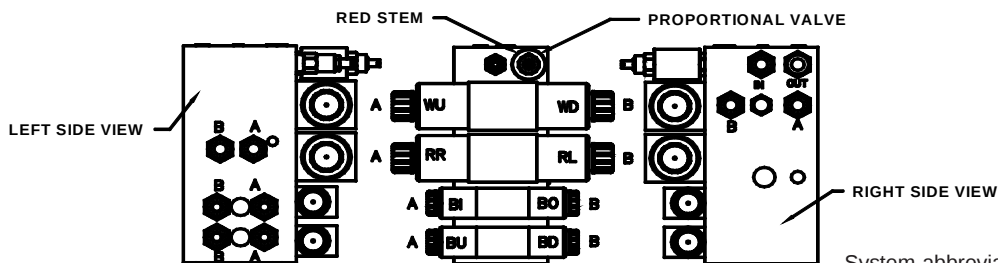
TITLE	DATE	SECTION
INSTALLATION DWG	2-3-09A	C200
HT40KX, HT50KX, HT66KX	SUPERCEDES 5-13-05	22174

EXPLANATION OF HYDRAULIC VALVE SYSTEM

OVERVIEW

This proportional crane utilizes a proportional valve, which controls the rate at which the hydraulic fluid flows through the valve bank. When the proportional valve is fully closed, hydraulic fluid bypasses the valve bank and returns directly to the tank. When the proportional valve is fully open, hydraulic fluid cycles through the valve bank and allows the crane to function at full speed. When the proportional valve is at any setting between, a portion of the fluid is allowed through the valve bank, with the remainder returning directly to the tank.

The four crane functions (winch, rotation, boom elevation, and boom extension) are controlled by four separate valve sections. Each valve section has two solenoid coils (and two manual overrides) which control the direction that the function operates (e.g. winch up vs. winch down). For a given crane function and direction (e.g. winch up) the solenoid coil and the associated manual override lie on the same side of the valve bank (both “push”).



System abbreviations are as follows:

WD – Winch Down	WU – Winch Up
RR – Rotation Right	RL – Rotation Left
BI – Boom In (Ext.)	BO – Boom Out (Ext.)
BD – Boom Down (Elev.)	BU – Boom Up (Elev.)

MANUAL OVERRIDE SYSTEM

Should an electrical failure occur, your Venturo crane can be operated manually. **The manual overrides are intended for emergency use only and should not be used for normal operation.**

To operate in manual override mode:

- Override the proportional valve by turning the red stem on the valve as stated below.
 - For override operation, rotate stem clockwise (the farther the stem is turned the faster the crane will operate).
 - To return to normal operation, rotate the stem counterclockwise until it stops.
- Determine the coil/override associated with the function you wish to operate, then insert a small diameter object (an allen wrench works well) into the detent on the end of the valve stem and press firmly inward. For example, pushing the stem labeled A on the first bank (refer to the illustration) will actuate winch up.

Warning! For normal crane operation, the proportional valve must be in the “normal” position (as described above). To verify “normal” operation, you may set the pendant (or radio) control aside and actuate a single crane function by pushing “in” on any of the manual override pins, located at the ends of each function control valve. If that function operates, the proportional valve is still in manual override. Check the position of the proportional valve “red thumb screw” to insure that it is fully counterclockwise.

EMERGENCY STOP

In the unlikely event that a function of the crane does not stop once the function’s toggle switch is released, the Proportional crane can be stopped by releasing the trigger.



MFG., INC.
CINCINNATI, OHIO

TITLE
HYDRAULIC SYSTEM

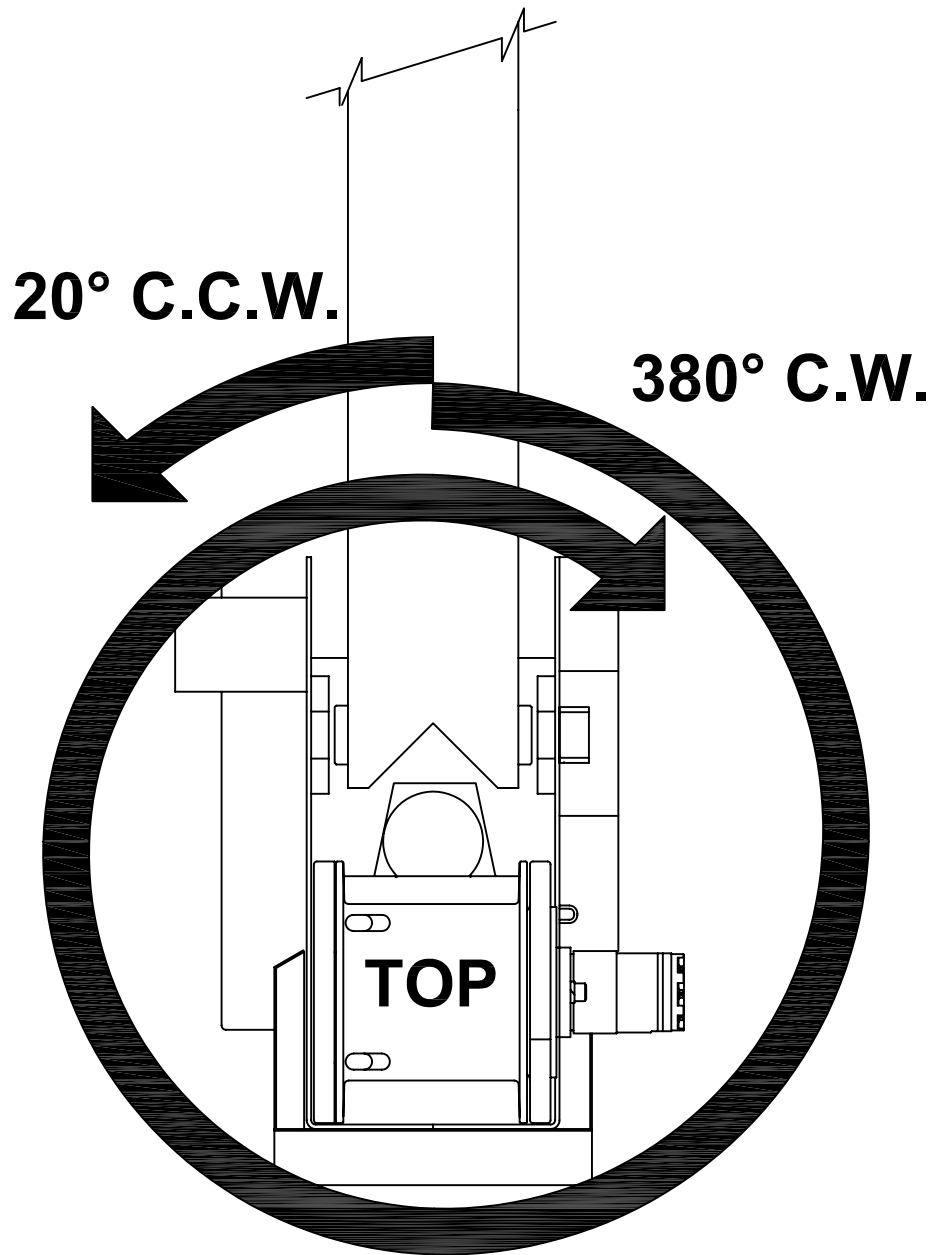
HT40/50 - PROP

DATE
5-26-05

SUPERCEDES
-

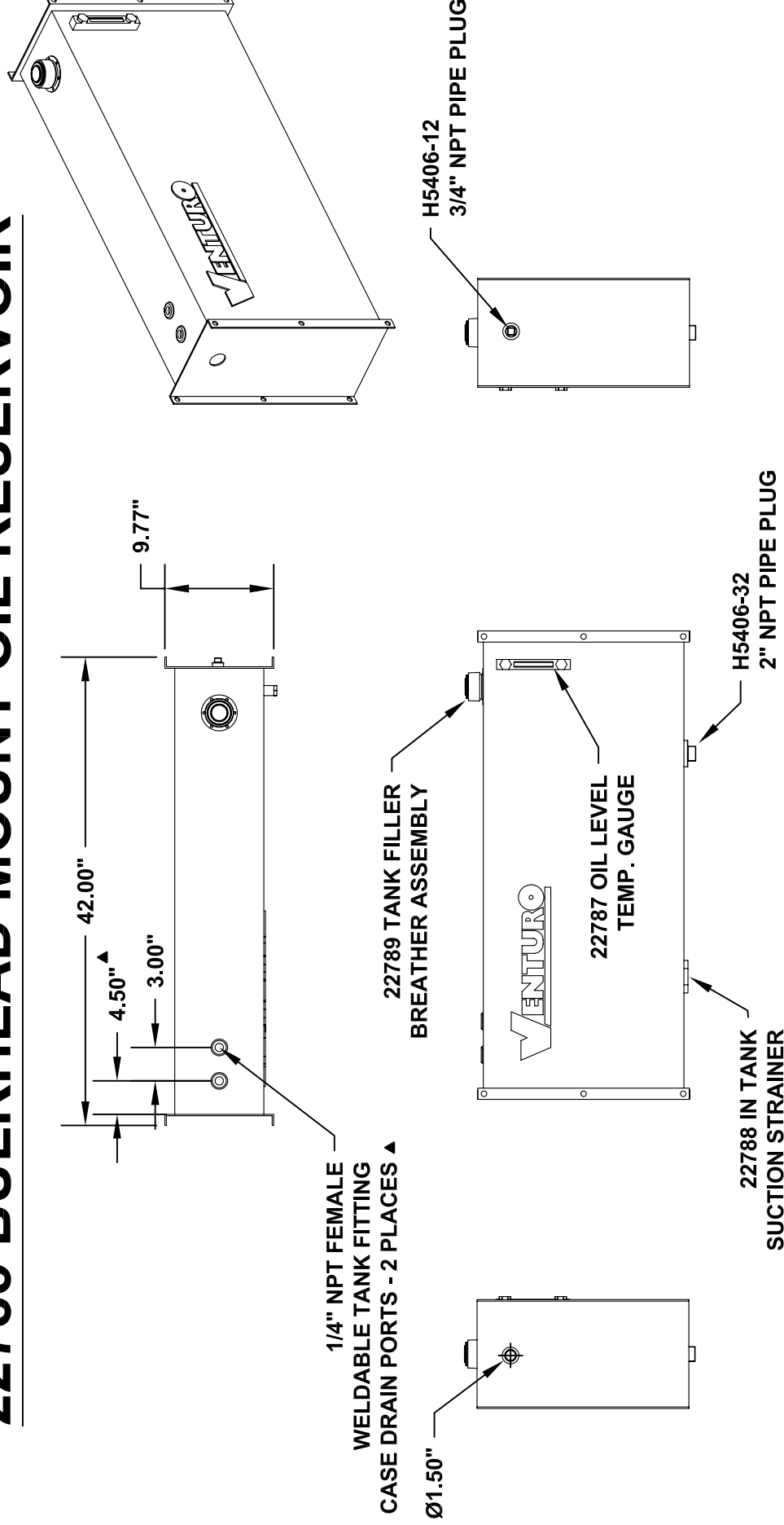
SECTION
C200

22168



This Venturo crane is shipped with the rotation orientation as shown above. To change the orientation rotate crane base prior to mounting to suit your application.

22785 BULKHEAD MOUNT OIL RESERVOIR



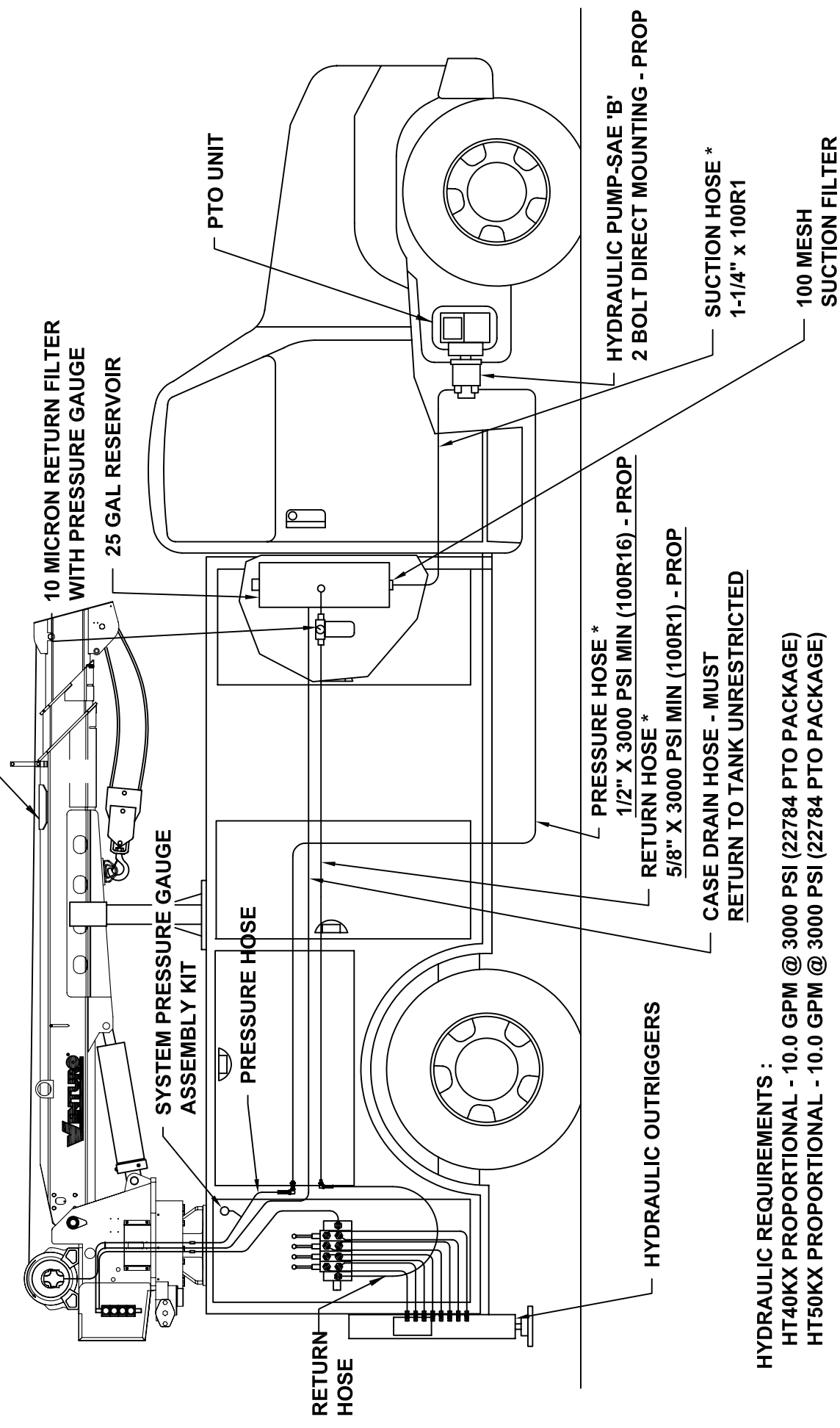
 VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE 25 GALLON HYDRAULIC TANK		DATE 8-26-09C	SECTION -
	-		SUPERSEDES 11-5-08B	22825



CAUTION: THE CASE DRAIN LINE FROM THE WINCH MUST HAVE AN UNRESTRICTED PATH TO TANK/RESERVOIR.

HT40/50KX PROPORTIONAL CRANE

FOR INFORMATION ON OUR
PTO PACKAGES REFERENCE 22448



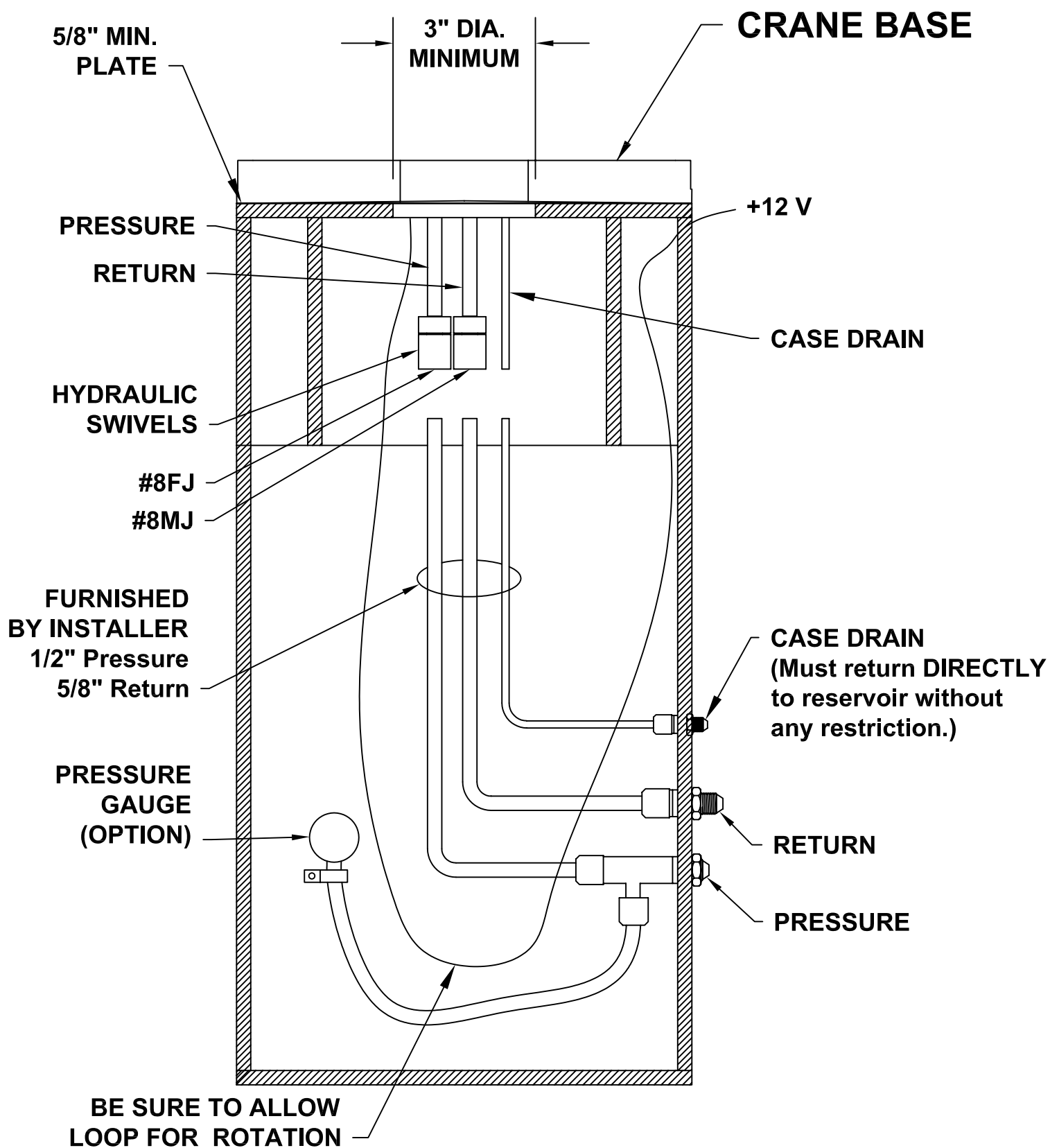
HYDRAULIC REQUIREMENTS :

- HT40KX PROPORTIONAL - 10.0 GPM @ 3000 PSI (22784 PTO PACKAGE)
- HT50KX PROPORTIONAL - 10.0 GPM @ 3000 PSI (22784 PTO PACKAGE)

SEE INSTALLATION INSTRUCTIONS 22344 (2 PAGES).

* HOSES OR FITTINGS BETWEEN PUMP, RESERVOIR, AND CRANE NOT INCLUDED.

 MANUFACTURING, INC. CINCINNATI, OHIO	TITLE INSTALLATION DWG		DATE 7-21-08A	SECTION C200
	PTO INST - HT40/50 (PROPORTIONAL)		SUPERSEDES 1-4-07	22883



MFG., INC.
CINCINNATI, OHIO

TITLE
CRANE & HOSE INST.

HT40/50/66 - PROP

DATE
9-10-09B

SUPERSEDES
2-3-09A

SECTION
C200

22913

WIRE ROPE INSTALLATION

STEP 1: UNWIND COIL OF WIRE ROPE BY 'ROLLING' ALONG THE FLOOR. THIS WILL PREVENT 'KINKING'.

STEP 2: INSERT WIRE ROPE END THROUGH ANTI-TWO-BLOCK WEIGHT.

STEP 3: INSERT WIRE ROPE END INTO POCKET OPENING ON WINCH AND THROUGH WEDGE POCKET AS SHOWN IN (FIG 1).

CAUTION: IF THE WIRE ROPE IS NOT INSTALLED FOR THE CORRECT DRUM ROTATION, THE WINCH BRAKE VALVE WILL NOT HOLD THE LOAD.

CAUTION: THERE MUST ALWAYS BE AT LEAST (3) TURNS OF WIRE ROPE ON THE WINCH DRUM WHILE UNDER LOAD.

NOTE:  SOME WINCHES WILL BE SUPPLIED WITH A HEX NUT IN LIEU OF A WEDGE FOR INSTALLING THE WIRE ROPE.

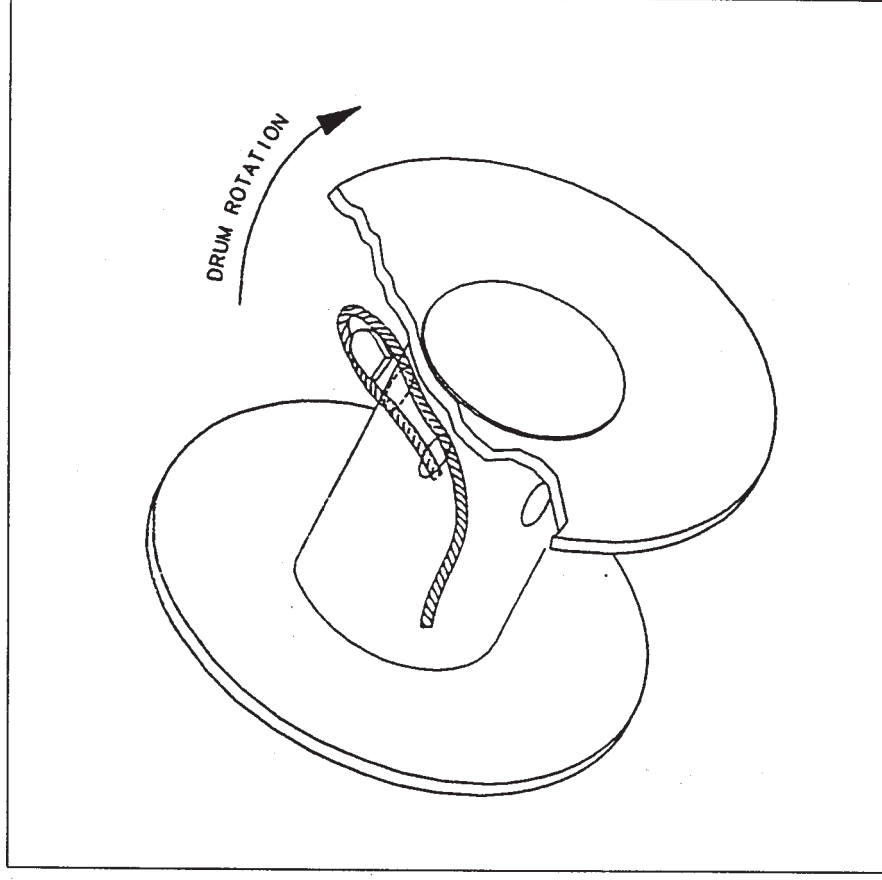


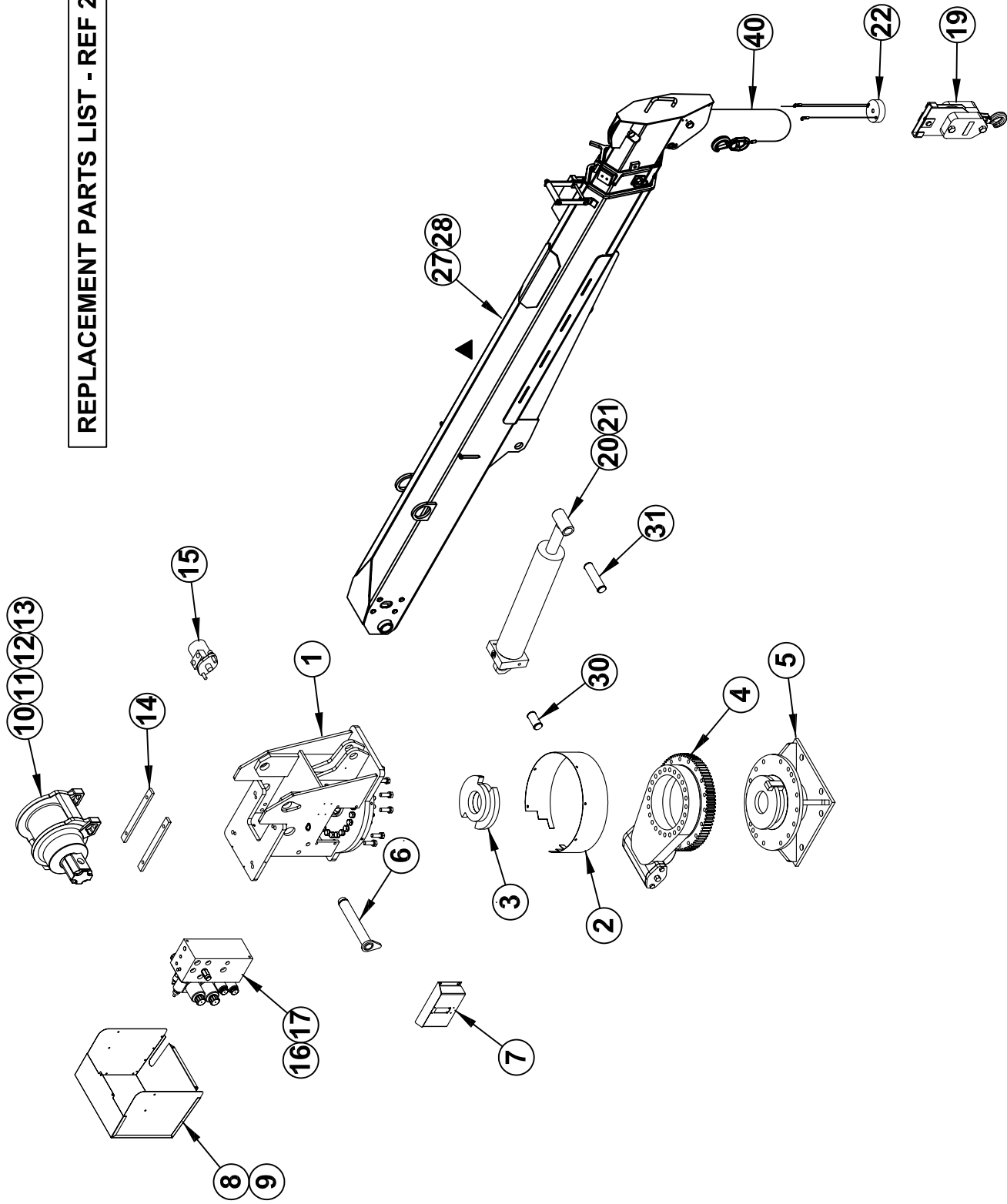
FIG 1

SECTION 400

PARTS



REPLACEMENT PARTS LIST - REF 22915

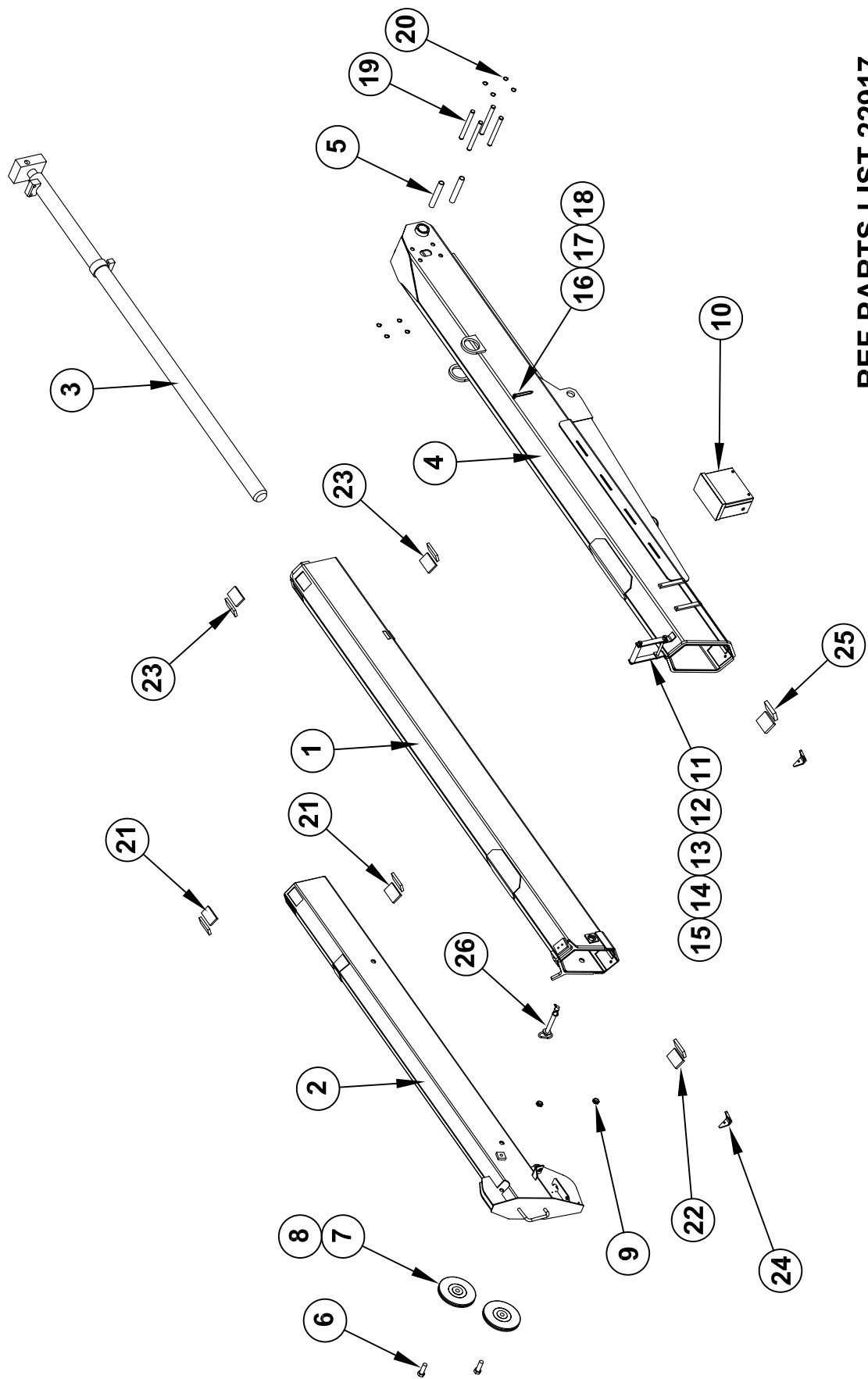


<
--

ITEM #	PART #	DESCRIPTION	ITEM #	PART #	DESCRIPTION
1	22840	HOUSING WELDED ASSEMBLY	41	-	-
2	22726	OUTERRING	42	-	-
3	22702	ROTATION STOPPING WELDED ASSEMBLY	43	-	-
4	22704	SLEWING RING	44	-	-
5	22710	PEDESTAL WELDED ASSEMBLY	45	-	-
6	22721	PIVOT PIN MAIN BOOM PIVOT	46	-	-
7	22715	SIDE COVER	47	-	-
8	22841	REAR HYD. VALVE COVER - NON-PROP.	48	-	-
9	22842	REAR HYD. VALVE COVER - PROP.	49	-	-
10	22828	WINCH - 3000 LB (SINGLE LINE) - HT40KX - NON-PROP	50	-	-
11	22829	WINCH - 3000 LB (SINGLE LINE) - HT40KX - PROP	51	22920	FIELD SERVICE LABEL KIT - HT40KX NON-PROP.
12	22909	WINCH - 4000 LB (SINGLE LINE) - HT50KX - NON-PROP	52	22921	FIELD SERVICE LABEL KIT - HT40KX PROPORTIONAL
13	22830	WINCH - 4000 LB (SINGLE LINE) - HT50KX - PROP	53	22924	FIELD SERVICE LABEL KIT - HT50KX NON-PROP.
14	21940	WINCH SPACER (HT40KX ONLY)	54	22925	FIELD SERVICE LABEL KIT - HT50KX PROPORTIONAL
15	19177	HYDRAULIC ROTATION MOTOR	55	-	-
16	22501	HYDRAULIC VALVE ASSEMBLY - NON-PROP	56	-	-
17	22736	HYDRAULIC VALVE ASSEMBLY - PROP.	57	-	-
18	-	-	58	-	-
19	17770	HEADACHE BALL ASSEMBLY	59	-	-
20	21747 ▲	ELEV. CYL. 4.5" BORE x 2" ROD x 19.63" STROKE	60	-	-
21	22022-1	ELEV. C YL. 5" BORE x 2" ROD x 19.63" STROKE	61	-	-
22	19377-3	19377-1 ANTI-2-BLOCK WEIGHT ASSEMBLY	62	-	-
23	-	-	63	-	-
24	-	-	64	-	-
25	-	-	65	-	-
26	-	-	66	-	-
27	21420	BOOM ASSEMBLY - HT40/50KX	67	-	-
28	21410	BOOM ASSEMBLY - HT40/50KXX	68	-	-
29	-	-	69	-	-
30	22256	ELEVATION CYLINDER PIN - INBOARD	70	-	-
31	22257	ELEVATION CYLINDER PIN - OUTBOARD	71	-	-
32	-	-	72	-	-
33	-	-	73	-	-
34	-	-	74	-	-
35	-	-	75	-	-
36	-	-	76	-	-
37	-	-	77	-	-
38	-	-	78	-	-
39	-	-	79	-	-
40	17094-3/8-100	WIRE ROPE ASSEMBLY - 3/8" x 100 FT	80	-	-
		ITEM NOT SHOWN ON REPLACEMENT PARTS DRAWING REPLACEMENT PARTS DWG REF 22914			

VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE		REPLACEMENT PARTS		SECTION
			HT40KX, HT50KX		DATE 3-24-09B SUPERCEDES 7-21-08A C400 22915

21420 BOOM PARTS DRAWING (POWER / MANUAL)



REF PARTS LIST 22917

 MANUFACTURING, INC. CINCINNATI, OHIO	TITLE		SECTION	
	21420 BOOM PARTS DRAWING		C400	
	HT40/50KX - HEX BOOM		22916	
	DATE		SUPERSEDES	
	3-19-08A		9-10-07	

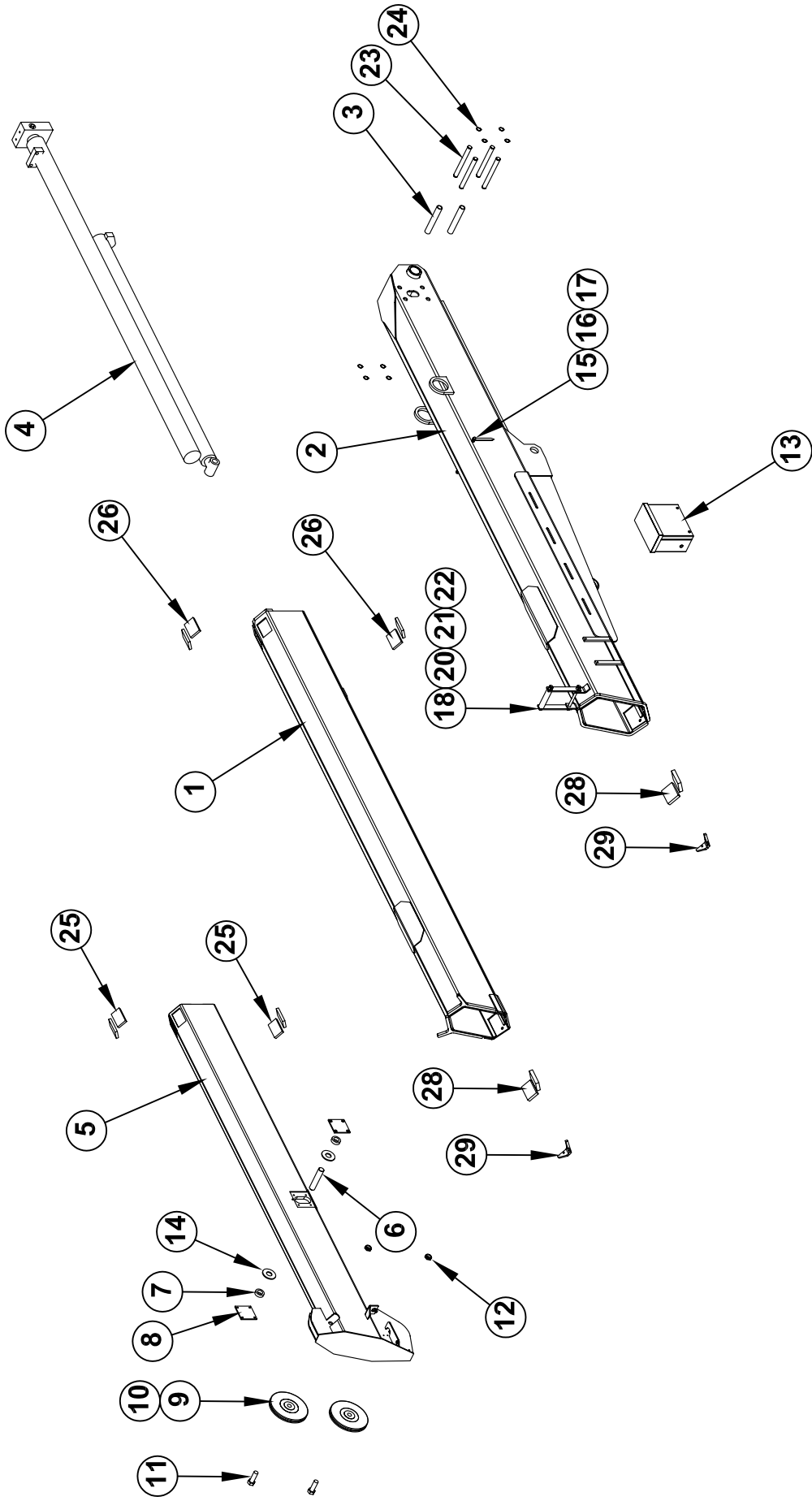
21420 BOOM PARTS LIST

26	1	14600	HITCH PIN ASSEMBLY
25	2	U063X2.50	UHMW 063X2.50
24	2	23183	V-BLOCK SLIDER
23	4	U044X2.13	UHMW 044X2.13
22	2	U050X2.13	UHMW 050X2.13
21	4	U044X1.88	UHMW 044X1.88
20	8	ISRNG-075	RETAINING RING - 3/4" SHAFT DIA.
19	4	22255	EXTENSION CYLINDER THRUST PIN
18	2	IANUT-02520S	ACORN NUT 1/4-20 STAINLESS
17	2	13459-2	BOOM ARROW 4-7/16 LONG
16	2	22490	SPACER, BOOM ARROW 1/2" O.D.
15	2	ILNUT-04414	NYLON INSERT LOCK NUT - 7/16-14
14	1	IHHCS04414550	HEX HEAD CAP SCREW - 7/16-14 X 5-1/2 LG
13	1	21560	ROLLER,UHMW GUIDE
12	1	21936	FLAT,MOUNT;WIRE ROPE GUIDE
11	1	21935	WIRE-ROPE GUIDE WELDED
10	1	22685	ANTI 2 BLOCK CORD REEL ASSEMBLY
9	2	ILNUT-07510	LOCKNUT 3/4-10
8	2	23929	SPACER - 23927 & 23928 POLY SHEAVES
7	2	23928	BOOM SHEAVE WITH BUSHING
6	2	17059-1	SHEAVE AXLE
5	2	24535	THRUST ROLLER
4	1	27207	PRIMARY BOOM WELDED ASSEMBLY
3	1	22032-H	EXTENSION CYLINDER
2	1	27214	TERTIARY BOOM ASSEMBLY
1	1	27212	SECONDARY BOOM TUBE WELDED ASSEMBLY
ITEM NO. QTY. PART NUMBER			DESCRIPTION

REF PARTS DRAWING 22916

 VENTURO [®] MANUFACTURING, INC. CINCINNATI, OHIO	TITLE REPLACEMENT PARTS LIST		SECTION C400
	HT40/50KX		DATE 10-27-09B SUPERSEDES 3-19-08A
			22917

21410 BOOM PARTS DRAWING (FULL POWER)



REF. PARTS LIST 22931

 VENTURO [®] MANUFACTURING, INC. CINCINNATI, OHIO	TITLE		SECTION	
	21410 BOOM PARTS DRAWING		C400	
	HT40/50KXX BOOM		22930	
		DATE	SUPERSEDES	
		6-3-08A	9-25-07	

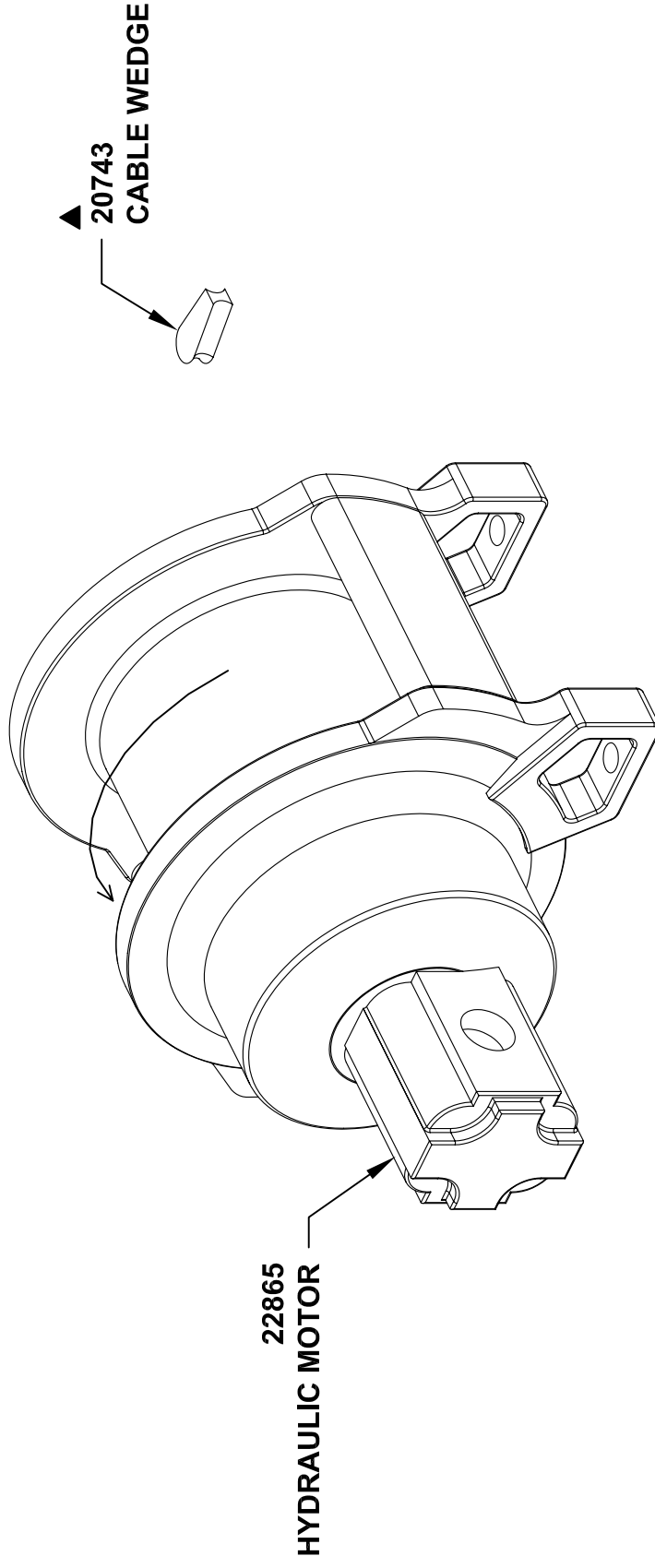
21410 BOOM PARTS LIST

29	2	23183	V-BLOCK SLIDER
28	2	U063X2.50	UHMW 063X2.50
27	2	U063X2.13	UHMW 063X2.13
26	4	U044X2.13	UHMW 044X2.13
25	4	U044X1.88	UHMW 044X1.88
24	8	ISRNG-075	RETAINING RING - 3/4" SHAFT DIA.
23	4	22255	EXTENSION CYLINDER THRUST PIN
22	2	ILNUT-04414	NYLON INSERT LOCK NUT - 7/16-14
21	1	21560	ROLLER,UHMW GUIDE
20	1	IHHCS04414550	HHCS - 7/16-14 X 5-1/2 LG
19	1	21936	FLAT,MOUNT;WIRE ROPE GUIDE
18	1	21935	WIRE-ROPE GUIDE WELDED
17	2	IANUT-02520S	ACORN NUT 1/4-20 STAINLESS
16	2	13459-2	BOOM ARROW 4-7/16 LONG
15	2	22490	SPACER; BOOM ARROW 1/2" O.D.
14	2	IFWSH-100	FLAT WASHER - 1"
13	1	22685	ANTI 2 BLOCK CORD REEL ASSEMBLY
12	2	IJNUT-07510N	NYLON LOCK-JAMNUT 3/4-10
11	2	17059-1	SHEAVE AXLE
10	2	23929	SPACER - 23927 & 23928 POLY SHEAVES
9	2	23928	BOOM SHEAVE WITH BUSHING
8	2	23116	PIN BLOCK REINFORCING
7	2	21428	BUSHING
6	1	21405	PIN - CYLINDER
5	1	21416	TERTIARY BOOM ASSEMBLY
4	1	21744	EXTENSION CYLINDER
3	2	24535	THRUST ROLLER
2	1	27207	PRIMARY BOOM WELDED ASSEMBLY
1	1	27209	SECONDARY BOOM WELDED ASSEMBLY
ITEM NO.	EXPLODED/QTY.	PART NUMBER	DESCRIPTION

REF PARTS DRAWING 22930

 VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE		REPLACEMENT PARTS LIST	DATE	SECTION
	HT40/50KXX		22931	10-1-09B	C400
				SUPERSEDES 6-3-08A	

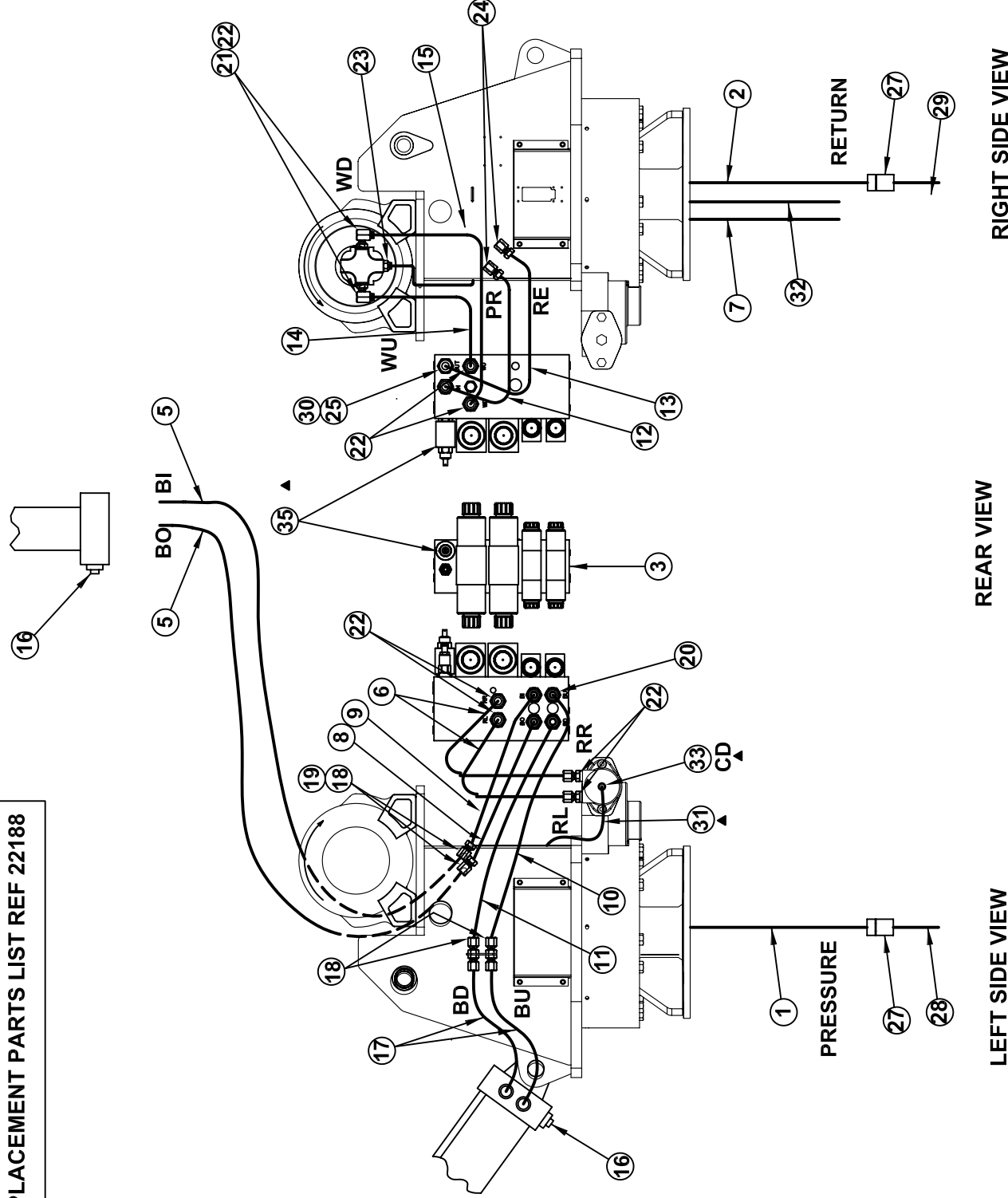
REPLACEMENT PARTS 22830 WINCH



▲ WINCH SERVICE KIT P/N: 21133
▲ MOTOR SERVICE KIT P/N 22902 (511 MOTOR)

 MANUFACTURING, INC. CINCINNATI, OHIO	TITLE		DATE	SECTION
	REPLACEMENT PARTS DRAWING		7-21-08A	-
	▲ 22830 ROTZLER WINCH - HT50KX PROP		SUPERSEDES 12-18-06	22876

REPLACEMENT PARTS LIST REF 22188



RIGHT SIDE VIEW

REAR VIEW

LEFT SIDE VIEW

CD	CASE DRAIN
RR	ROTATION RIGHT
RL	ROTATION LEFT
BO	BOOM OUT
BI	BOOM IN
BU	BOOM UP
BD	BOOM DOWN
PR	PRESSURE
RE	RETURN
WU	WINCH UP
WD	WINCH DOWN

TITLE	REPLACEMENT PARTS DRAWING	DATE	8-31-09F	SECTION	C400
	HT40/50KX PROP HYD. COMPONENTS	SUPERSEDES	12-16-08E		22183

HYDRAULIC SYSTEM COMPONENTS - HT40/50KX CRANES

REPLACEMENT PARTS LIST

ITEM	PARTNUMBER	DESCRIPTION
1	22760	PRESSUREHOSE
2	22761	RETURNHOSE
3	22736	VALVE BANK - HT40KX, HT50KX
4	-	-
5	22363	EXTENSIONCYLINDERHOSE
6	22751	HYD TUBING - ROTATION
7	22903	HOSE - CASE DRAIN
8	22757	HYD TUBING - BOOM OUT
9	22756	HYD TUBING - BOOM IN
10	22755	HYD TUBING - BOOM UP
11	22754	HYD TUBING - BOOM DOWN
12	22758	HOUSINGPRESSUREHOSE
13	22759	HOUSINGRETURNHOSE
14	22831	HOSE - WINCH UP
15	22832	HOSE - WINCH DOWN
16	20893	COMMAND AND CONTROL VALVE (ELEVATION & EXTENSION CYLINDERS)
17	22382	ELEV CYLINDER HOSE - 22" x 6MBX x 6FJX
18	H2700-0606	HYD BULKHEAD
19	H6502-0606	HYD ELBOW FITTING - 6MJ-6FJX - 90°
20	H6400-0606	HYD NIPPLE
21	H6801-0808	HYD ELBOW
22	H6410-1608	REDUCER - EXPANDER - 16MO-8FO
23	H6801-0404	HYD ELBOW - 4MJ-4MO - 90°
24	H2701LN-0808	HYD BULKHEAD UNION ELBOW W/ LOCK NUT 8MJ - 90°
25	H6801-1212	HYD ELBOW FITTING 12MO - 12MJ - 90° - EXTRA LONG DROP
26	22312-X.XX	PRIORITY FLOW CART (X.XX REFER TO CHART BELOW)
27	22764	LIVE CONTINUOUS HYDRAULIC SWIVEL
28	22762	PRESSURE HOSE - COMPARTMENT SIDE
29	22763	RETURN HOSE - COMPARTMENT SIDE
30	H2406-1210	HYD TUBE ADAPTER 12FJ - 10MJ
31	22952	CASE DRAIN HOSE 13" LONG
32	22953	CASE DRAIN HOSE 30" LONG
33	H6801-0404	ELBOW 4MJ-MO
34	H2603-040404	HYD. TEE - 4MJ-4MJ-4MJ
35	▲ 22502	PROPORTIONAL VALVE

REPLACEMENT PARTS DWG REF 22183

HT40	EXTENSION	2.25
	ELEVATION	4.00
HT50	EXTENSION	2.25
	ELEVATION	4.00



MFG., INC.
CINCINNATI, OHIO

TITLE
REPL. PARTS LIST

HT40/50KX - PROP

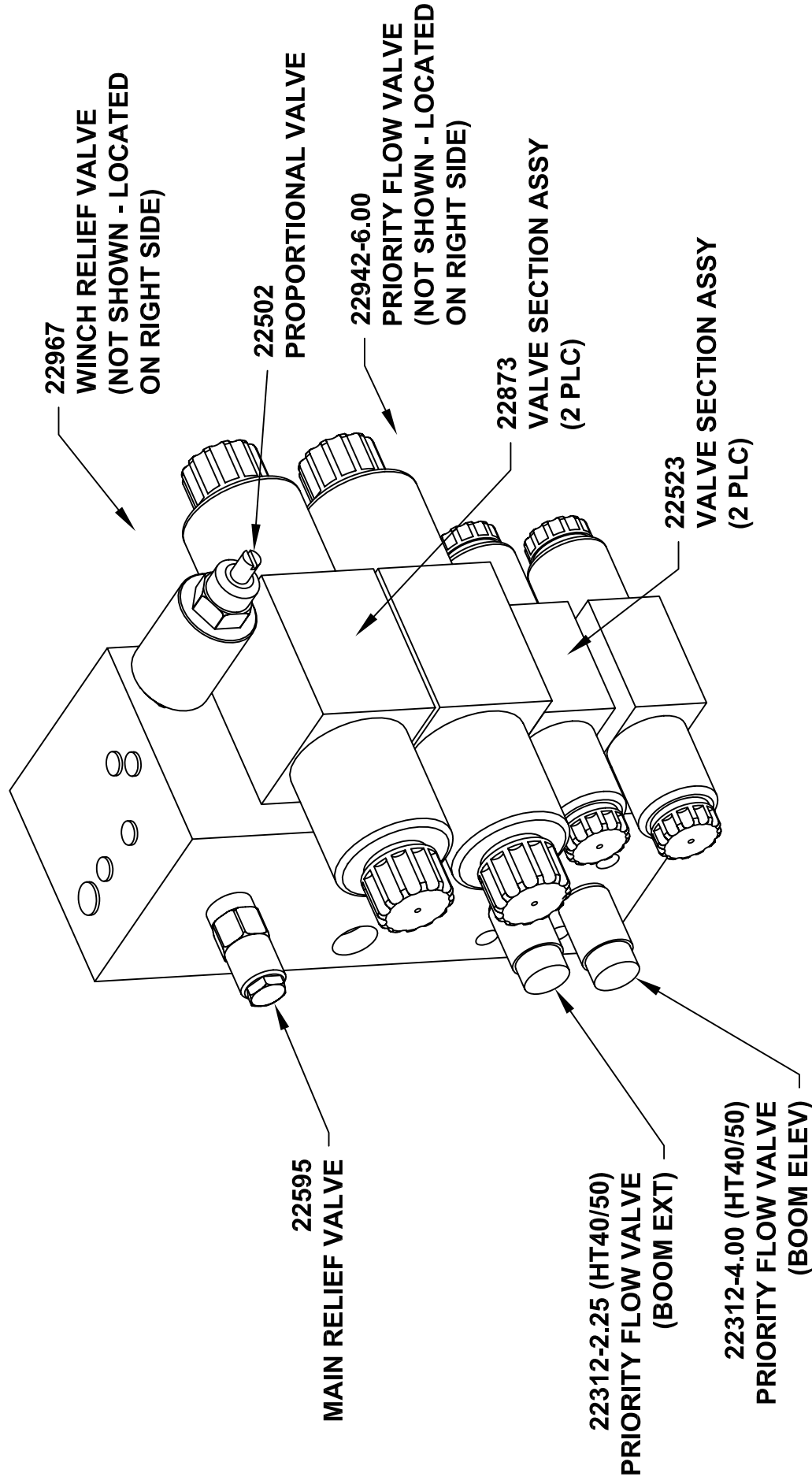
DATE
9-19-09F

SUPERCEDES
8-31-09E

SECTION
C400

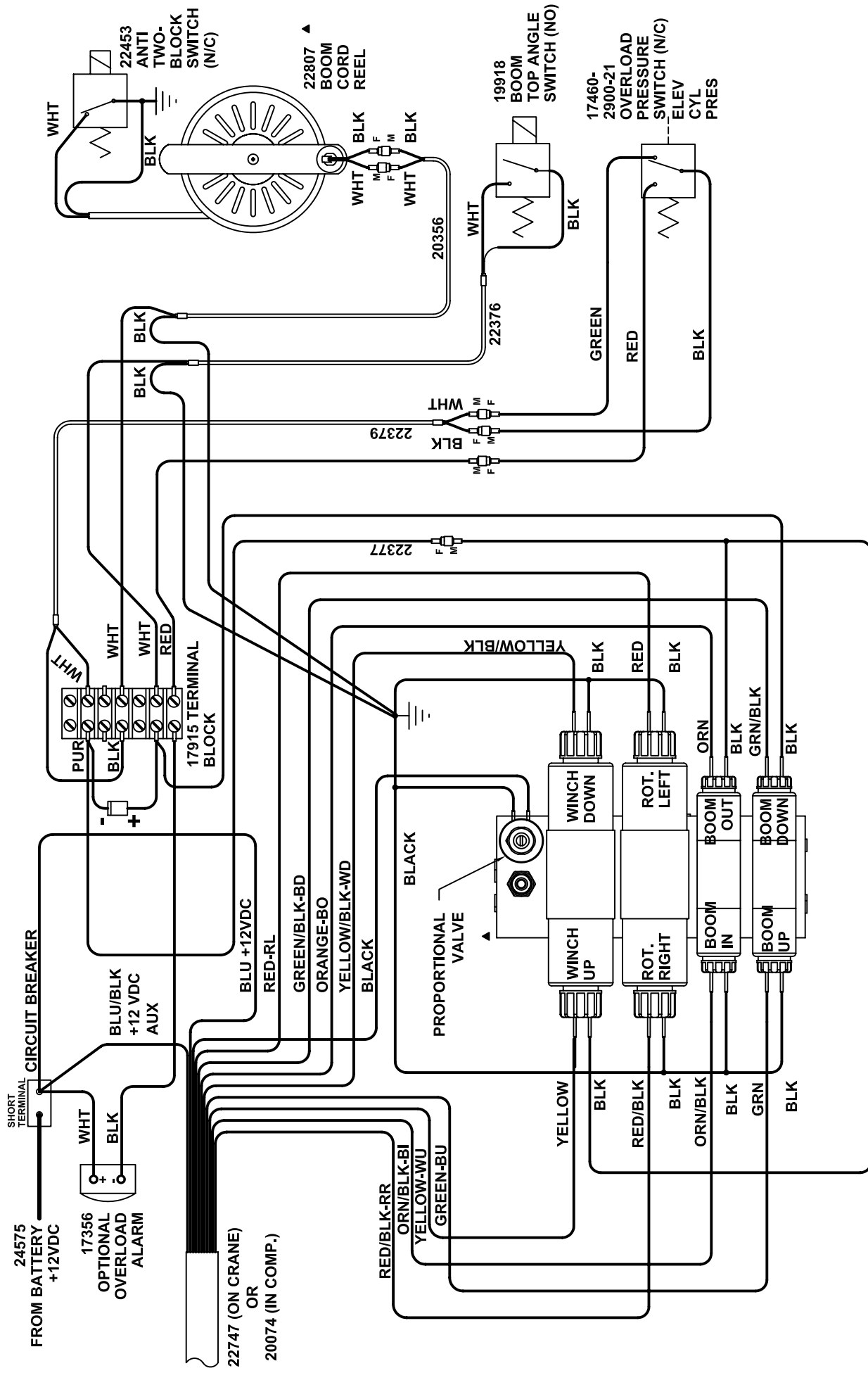
22188

22736 HYDRAULIC VALVE MANIFOLD REPLACEMENT PARTS

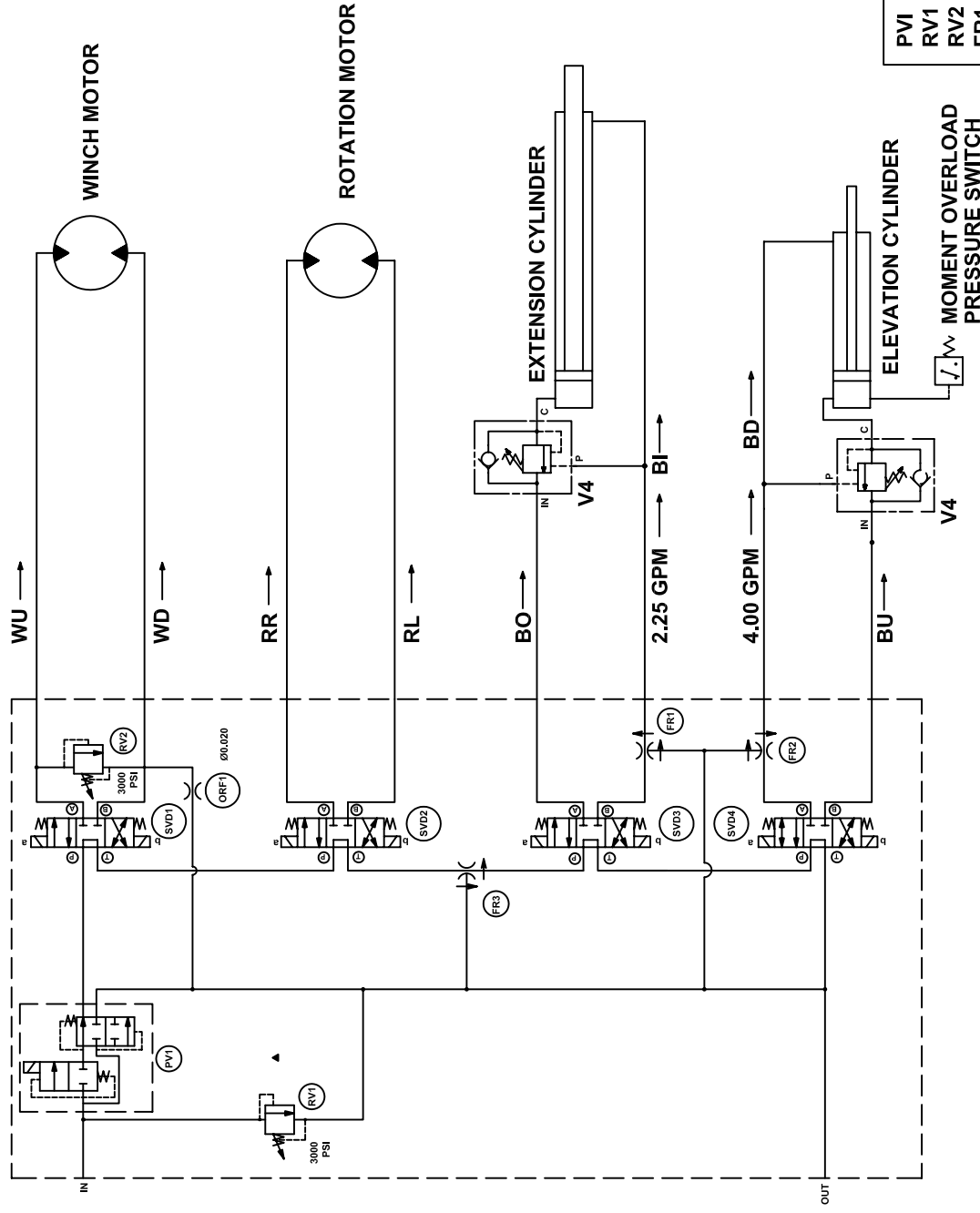


NOTE: HYDRAFORCE VALVE

VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE	22736 REPLACEMENT PARTS	DATE	9-15-09	SECTION	-
		HT40/50 PROPORTIONAL	SUPERSEDES	-		22941



 MANUFACTURING, INC. CINCINNATI, OHIO	TITLE WIRING DIAGRAM		DATE 9-27-07B	SECTION C400
	HT40/50KX - PROPORTIONAL		SUPERSEDES 5-11-06A	22185



- PVI PROPORTIONAL CONTROL VALVE (SIMPLIFIED REP)
RV1 INLET RELIEF VALVE (3000 PSI)
RV2 WINCH RELIEF VALVE
FR1 PRIORITY FLOW REGULATOR - 2.25 GPM
FR2 PRIORITY FLOW REGULATOR - 4.00 GPM
FR3 PRIORITY FLOW REGULATOR - 6.00 GPM
SVD1 3 POSITION - 4 WAY VALVE
SVD2 3 POSITION - 4 WAY VALVE
SVD3 3 POSITION - 4 WAY VALVE
SVD4 3 POSITION - 4 WAY VALVE



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE
HYDRAULIC SYSTEM DIAGRAM

HT40/50KX W/ PROP CONTROL

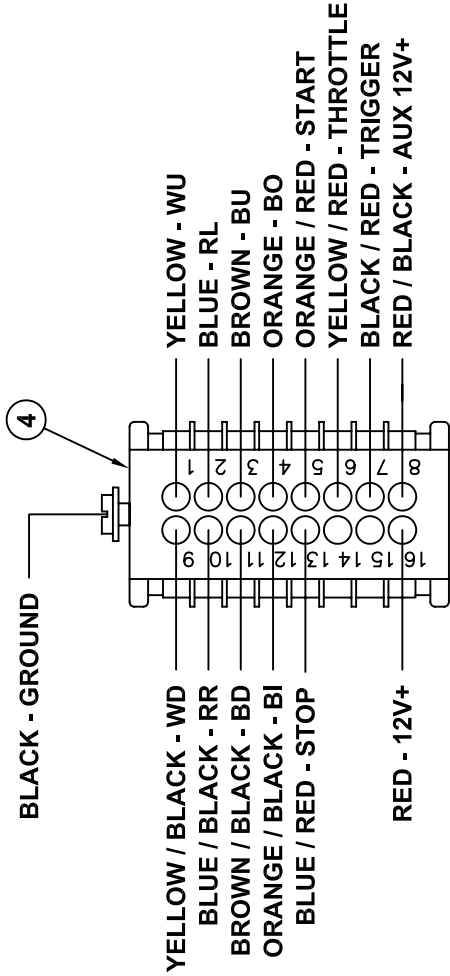
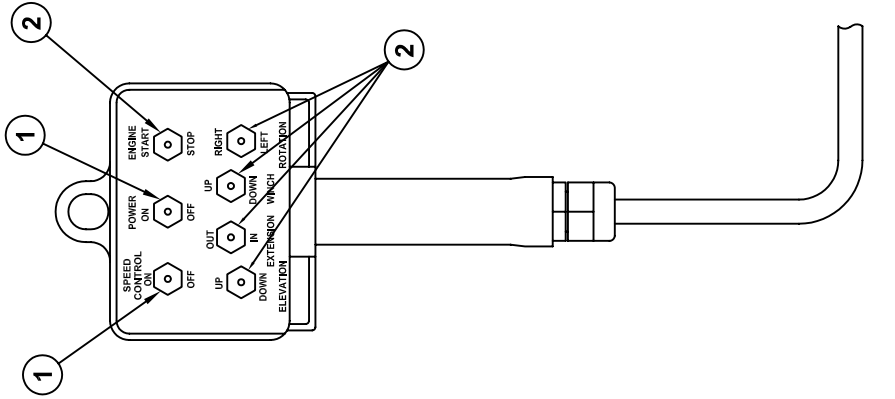
DATE
7-5-06A

SUPERSEDES
5-24-04

SECTION
C400

22187

22065 PENDANT (PROP W/ ENG CTRLS)

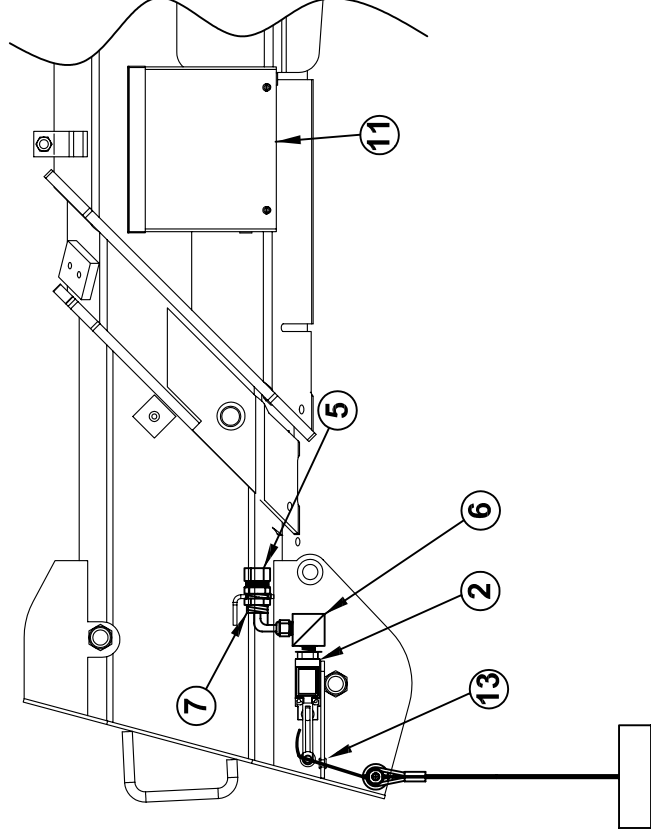
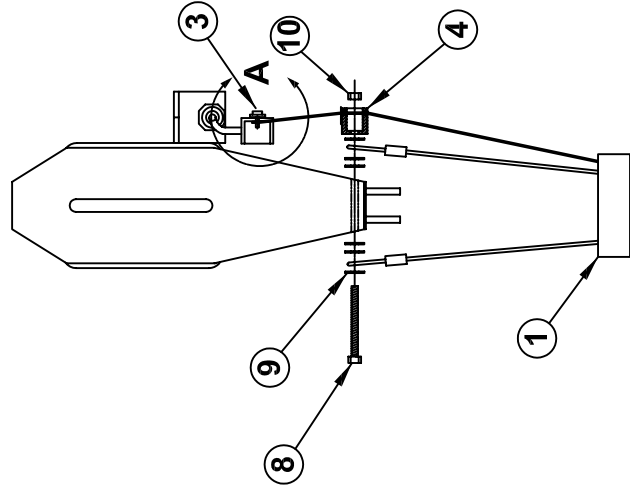


PLUG - BACKSIDE VIEW

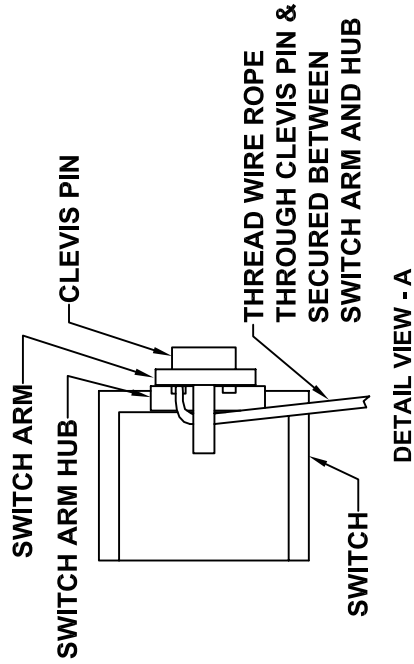
⊗ ITEM NOT SHOWN ON PRINT

ITEM	QTY	PART NO.	DESCRIPTION
5	1	22082	PROP. VALVE DRIVER CONT. BOARD
4	1	22472	MALE INSERT - 16 + 1 POLE
3	1	22471	PLUG CASE - 16 + 1 POLE
2	4	22081	SPDT MOMENTARY SWITCH
1	1	22080	SPST SWITCH

TITLE		DATE	SECTION
REPLACEMENT PARTS DRAWING		7-30-04A	C400
22065 PENDANT (PROP W/ ENG CTRLS)		SUPERSEDES 7-1-04	22073



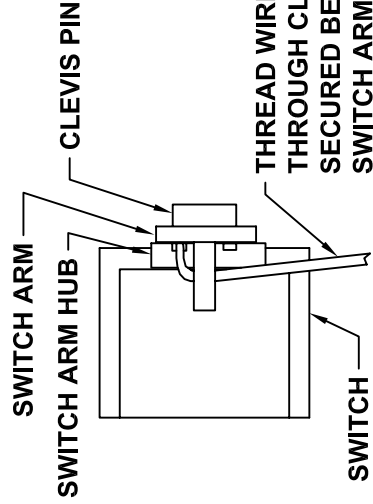
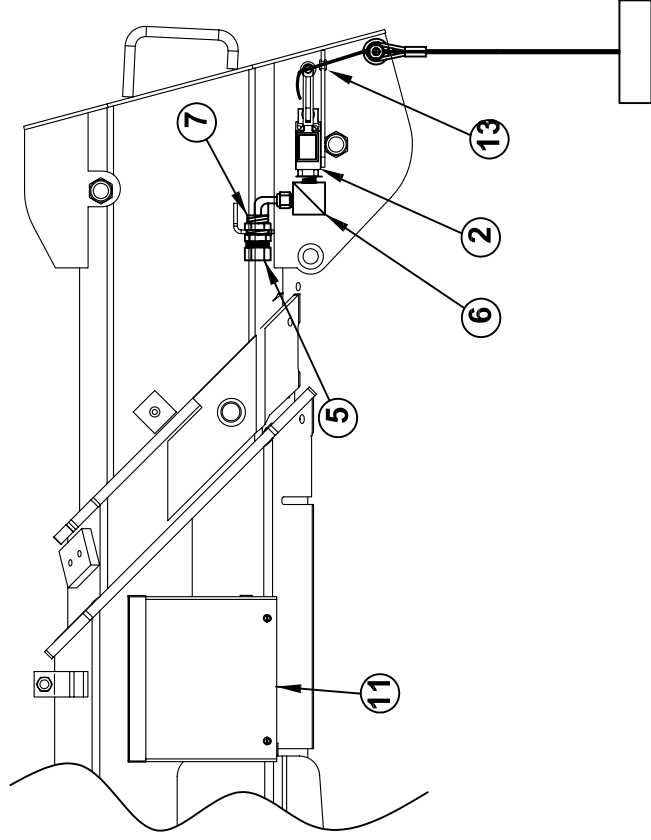
NOTE: FOR STANDARD LEFT HAND CORD REEL



13	1	19063	SNAP BUSHING - 1/2 I.D.
12	1	20951-3	HANGER CABLE
11	1	22683	CORD REEL ASSEMBLY - LEFT HAND
10	1	!LNUT-02520	LOCK NUT, NYLON 1/4-20
9	6	!FWSH-025	FLAT WASHER 1/4
8	1	!HHCS02520275	HHCS 1/4-20 x 2-3/4" GR. 5
7	1	PL-20-469	LOCKNUT (1/2" PIPE)
6	1	19060	STRAIN RELIEF - 90DEG
5	1	22455	STRAIN RELIEF - STRAIGHT (1/2" PIPE)
4	1	22454	CABLE GUIDE - BLACK DELRIN
3	1	21269	CLEVIS PIN - 3/16 X 1/2
2	1	22453	MICROSWITCH
1	1	19377-3	WEIGHT ASSY.

ITEM	QTY	PART NO.	DESCRIPTION
------	-----	----------	-------------

 VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE		REPLACEMENT PARTS DWG - LH CORD REEL	DATE	SECTION
	22685 ANTI-TWO BLOCK SYSTEM			9-11-07	C400
				SUPERSEDES	22918

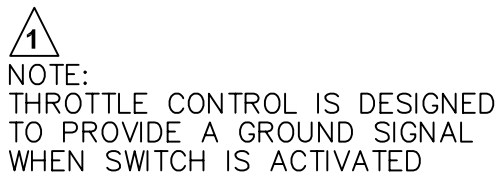


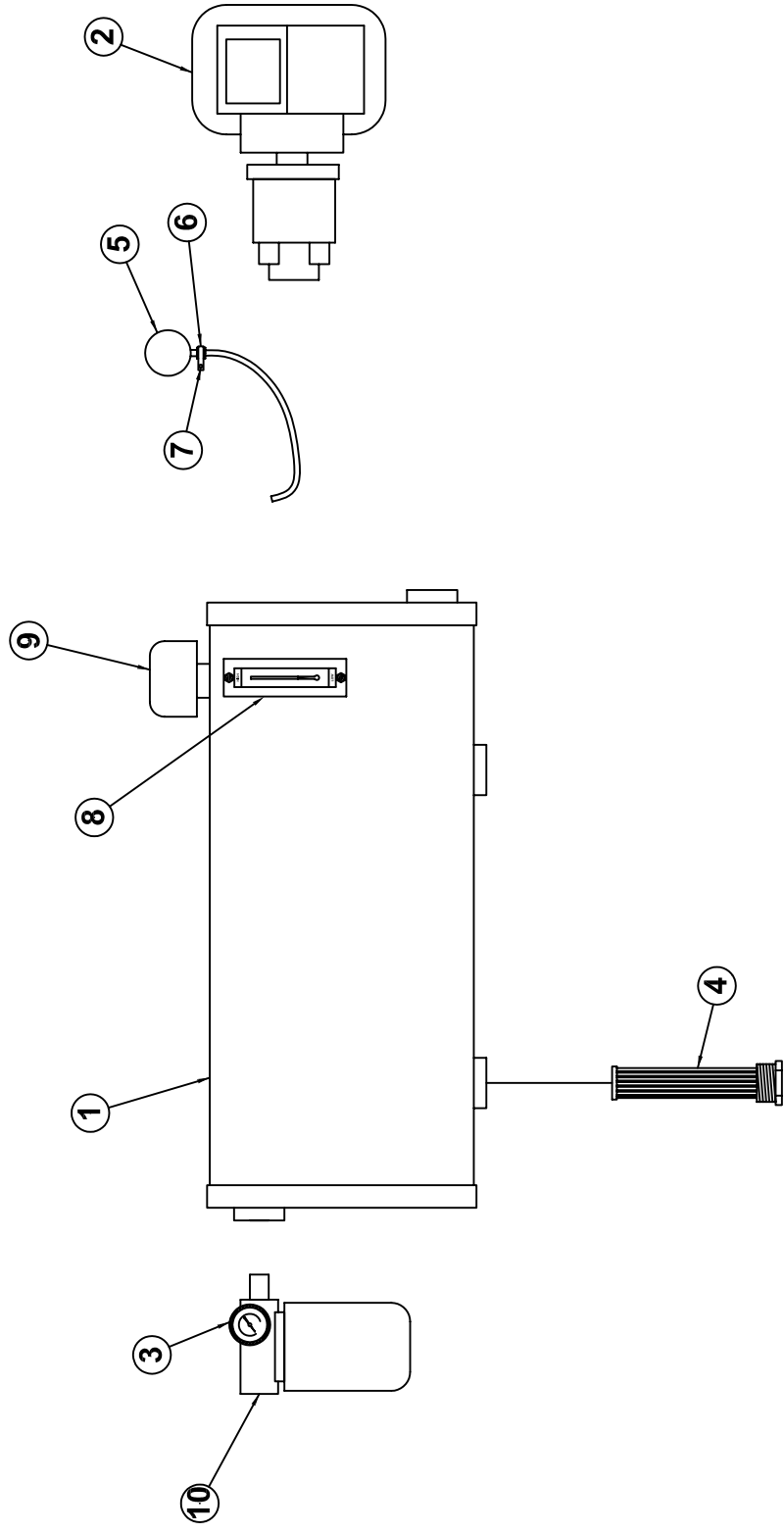
DETAIL VIEW - A

NOTE: FOR OPTIONAL RIGHT HAND CORD REEL.

13	2	19063	SNAP BUSHING 1/2 I.D.
12	1	20951-3	HANGER CABLE
11	1	22388	CORD REEL ASSEMBLY - RH
10	1	!LNUT-02520	LOCK NUT, NYLON 1/4-20
9	6	!FWSH-025	FLAT WASHER 1/4
8	1	!HHCS02520275	HHCS 1/4-20 x 2-3/4" GR. 5
7	1	PL-20-469	LOCKNUT (1/2" PIPE)
6	1	19060	STRAIN RELIEF - 90DEG
5	1	22455	STRAIN RELIEF - STRAIGHT (1/2" PIPE)
4	1	22454	CABLE GUIDE - BLACK DELRIN
3	1	21269	CLEVIS PIN - 3/16 X 1/2
2	1	22453	MICROSWITCH
1	1	19377-3	WEIGHT ASSY.
ITEM	QTY	PART NO.	DESCRIPTION

VENTURO MANUFACTURING, INC. CINCINNATI, OHIO	TITLE	DATE	SECTION
	REPLACEMENT PARTS DWG - RH CORD REEL	9-11-07	C400
	HT40KX, HT50KX	SUPERSEDES	22919





10	1	19298	FILTER ASSY, RETURN – 100 MESH
9	1	22789	FILLER / BREATHER CAP ASSEMBLY
8	1	22787	SIGHT GLASS
7	1	!HWH02520075-F	HEX WASHER HEAD 1/4-20 X 3/4 SELF TAPPING
6	1	19275	CLAMP
5	1	22730	PRESSURE GAUGE ASSEMBLY
4	1	22788	SUCTION SCREEN – 100 MESH
3	1	19297	PRESSURE GAUGE – RETURN
2	1	19296-10.0	PTO PUMP
1	1	22786	25 GAL. HYDRAULIC TANK



MANUFACTURING, INC.
CINCINNATI, OHIO

TITLE

PTO REPLACEMENT PARTS DRAWING

DATE

6-29-05

SECTION

-

SUPERSEDES

-

22783

HT50KX - PROPORTIONAL 22767-1 FIELD SERVICE LABEL KIT

ITEM	PART NUMBER	QTY	DESCRIPTION
1	15581	1	ATTACHMENT DECAL
2	15398	1	UNPLUG PENDANT DECAL
3	22768-1	1	VALVE BANK DECAL - LEFT
4	22768-2	1	VALVE BANK DECAL - RIGHT
5	14473-1	1	OIL DECAL
6	14473-2	4	GREASE DECAL
7	22496	2	VENTURO DECAL (LARGE)
8	15401	1	UNLAWFUL TO OPERATE DECAL
9	22352-1	1	HT50KX BOOM CAPACITY DECAL (RIGHT)
10	22352-2	1	HT50KX BOOM CAPACITY DECAL (LEFT)
11	19747	2	HT50KX DECAL
12	15392	1	DANGER ELECTROCUTION HAZZARD DECAL
13	15391	1	CRANE NOT PASSENGER LIFT DECAL
14	19315-2	1	PROPORTIONAL OVERRIDE HYDRAULIC BANK DECAL
15	15390	1	CAUTION, INSTRUCTIONS DECAL
16	22499	1	KNOW YOUR SIGNALS DECAL
17	22489	1	DECAL PLACEMENT DRAWING
18	19788	2	PROPORTIONAL CONTROL DECAL
19	20834	1	MANUAL OVERRIDE INSTRUCTION LOCATION DECAL
20	▲ 17389-4	1	SMALL VENTURO
21	-	-	-
22	-	-	-
23	-	-	-
24	-	-	-
25	-	-	-
26	-	-	-
27	-	-	-
28	-	-	-
29	-	-	-
30	-	-	-
31	-	-	-
32	-	-	-
33	-	-	-
34	-	-	-
35	-	-	-



MFG., INC.
CINCINNATI, OHIO

TITLE	DATE	SECTION
FIELD SERV. LABEL KIT	9-12-06A	-
HT50KX - PROP.	SUPERCEDES 6-21-06	20842



LIMITED WARRANTY POLICY

This limited policy warrants new products of Venturo be free from defects in material and workmanship for a period of one (1) year from date of original installation. This warranty covers:

- ◆ ***Repair or replacement of product***
- ◆ ***Labor to repair or replace product***
- ◆ ***Freight to return and/or replace product***

We shall not be liable for any contingent liabilities arising out of the improper function of any products. Warranty shall become void if the product is improperly installed, modified, damaged, abused or used for application other than intended use.

WARRANTY CLAIMS

Venturo Manufacturing, Inc. will make a good faith effort for prompt correction or other adjustment with respect to any product, which proves to be defective after our inspection and within the warranty period. Before any repairs are attempted or before returning any product, your Venturo Distributor is required to obtain a warranty claim number. This number is necessary for any claim to be considered. To obtain a warranty claim number, Venturo requires the model and serial number. Only authorized Venturo Distributors can perform warranty. For the name and address of your local Venturo Distributor call the **Warranty Claim Department – 513-772-8448**.

WARNING – It is the responsibility of the installer to insure the installation is completed according to the manufacturer's recommendations, insure the ultimate user understands how to operate product in a safe manner and understands the need for regular service and maintenance by an authorized Venturo Distributor. No modifications or alterations may be made to any Venturo products without the expressed written consent of the manufacturer. Reinstallation of any Venturo product must be done by an authorized Venturo Distributor, to the standards of the industry including maintenance, service and affixing of all instruction, safety and warning decals. Users should again be instructed as to the safe operation at time of delivery. Maintenance, service, operation and safety warning decals are available on request from Venturo Manufacturing, Inc.

VENTURO MANUFACTURING, INC

DIVISION OF COLLINS ASSOCIATES, INC
12110 BEST PLACE • CINCINNATI, OHIO 45241
513.772.8448
www.venturo.com